NEEDS ASSESSMENT-BOLIVIA

NUTRITION COMMUNICATION PROJECT

March 7-25, 1988

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EXECUTIVE SUMMARY

At the invitation of U.S.A.I.D./Bolivia, and based on the recommendation of an earlier Reconnaissance Visit (January, 1988), the Academy for Educational Development (AED) conducted a Nutrition Education/Communication Needs Assessment March 7-25, 1988. The team was composed of Peggy Koniz-Booher, Latin American Coordinator for AED's Nutrition Education and Social Marketing Project; Charles H. Teller, Nutrition Expert from the International Nutrition Unit of Logical Technical Services (LTS); Fernando Rocabado Q., Head of the Nutrition Surveillance Program of the Ministry of Social Welfare and Public Health (MPSSP); and Martha Clavizo T., Nutrition Program Director of Meals for Millions/Freedom from Hunger Foundation (MFM/FFH). Margaret Parlato, Director of AED's Nutrition Education and Social Marketing Project joined the team during the third week.

As part of the Assessment, the U.S.A.I.D. Mission arranged to fund the analysis of recent nutrition and socio-cultural/economic data in order to provide a sound framework for selecting priority nutrition problems, targeting regions of the country and population groups, and for designing appropriate communication activities. The Mission also funded a survey of the nutrition communication needs and capabilities of the 10 U.S.A.I.D.-supported Private Voluntary Organizations (PVOs) involved in Child Survival projects in Bolivia. In addition, the Assessment team reviewed current and planned nutrition programs; examined major information, education and communication (IEC) campaigns; identified potential communication channels; assessed in-country resources for nutrition, market and social science research; and reviewed in-country capabilities for the production of print materials, radio and television programs.

Major recommendations of the Assessment team include:

- development of an Interagency Coordinating Committee for Nutrition Programs with representation by U.S.A.I.D., PAHO, UNICEF, the World Bank, the Inter-American Development Bank, as well as the Ministry of Social Welfare and Public Health (MPSSP) and the two major PVO associations in Bolivia;

- formation of a Nutrition Communication Technical Advisory Group for the express purpose of identifying priority topics for communication programs, establishing message guidelines integrated with other Child Survival messages and facilitating the sharing of educational materials and training manuals;

- targeting of children at high risk to energy-protein malnutrition, 6-23 months of age, living in the provinces of western La Paz, northern Potasi, southern Cochabamba, and northern Chuquisaca for future nutrition communication interventions;

- provision of training and technical assistance to the PVO community in formative research and other methods related to the design and execution of nutrition communication programs, materials, and messages;

- development of a nutrition communication intervention to address infant feeding practices in up to three regions of the country; and

- support of program-oriented, socio-anthropological research on the causes of malnutrition in Bolivia. This information would serve as a basis for understanding illness and food-related habits and practices that might be modified through future nutrition and health programs and communication interventions.

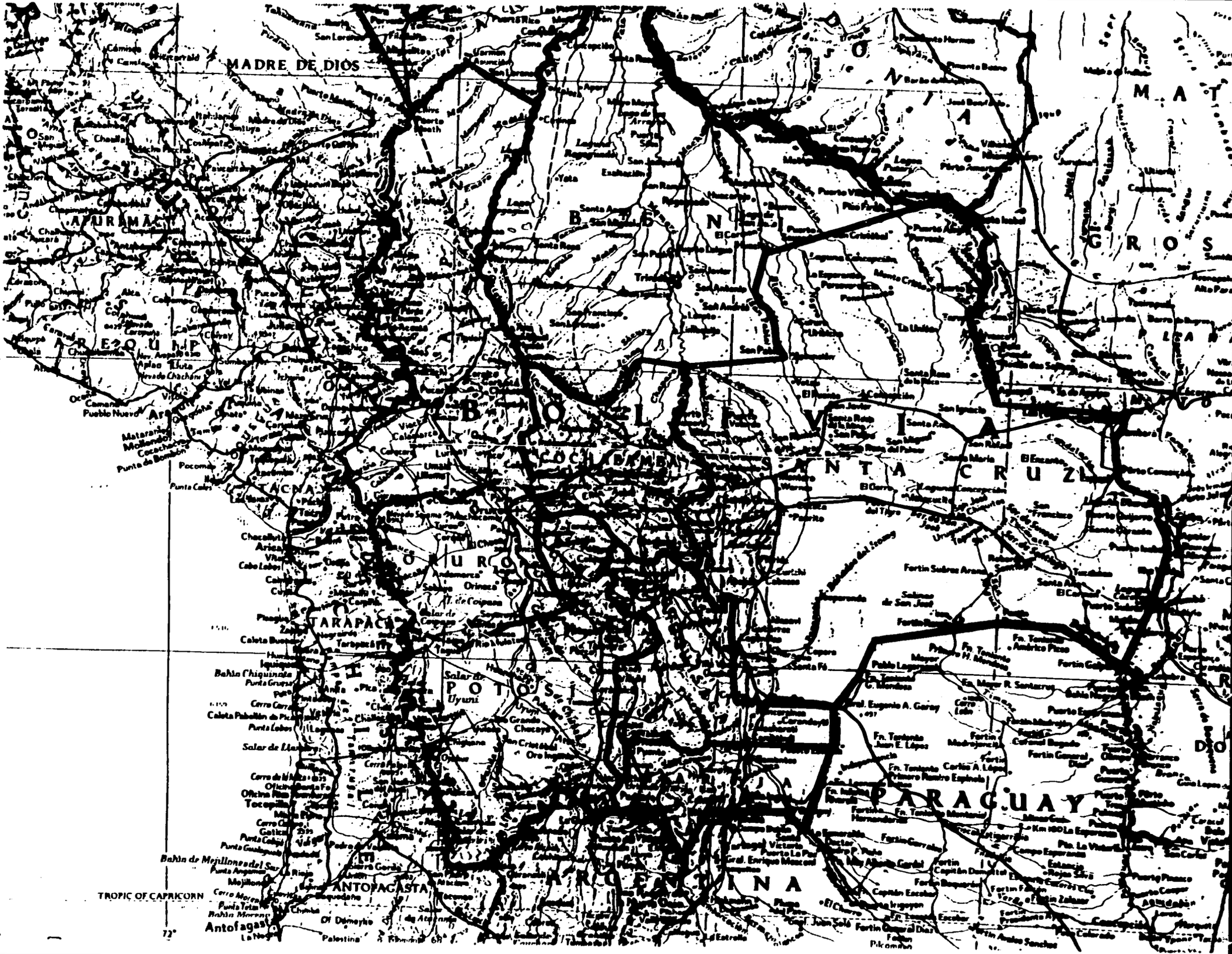
The broad outlines of a nutrition communication project were developed by the Assessment team before leaving the country. The executing agency for the project would be the Academy for Educational Development (AED) which would provide two long-term communication advisors based in La Paz. The proposed project has two distinct components, a field-level communication project and a comprehensive training program. Given U.S.A.I.D.'s present plan to strengthen the MPSSP's capacity to carry out social communication within Child Survival programs, and given the uncertain conditions surrounding the recent law to decentralize MPSSP activities, it was decided that the proposed project would work with the private sector, primarily through the association of ten U.S.A.I.D.-supported PVOs currently known as the PVO-REC.

One PVO with a Child Survival program would be selected (according to specific criteria) as a counterpart to the AED team to execute the field component. Based on the analysis of current research findings, the target population of the field project would be children 6-23 months of age living in the peri-urban areas of La Paz (El Alto) and up to two other high priority regions of the country. It is anticipated that priority messages would address energy-protein malnutrition and include the promotion of breastfeeding, appropriate infant weaning practices and the dietary management of diarrhea and other episodes of infection. The identification of specific educational messages and their prioritization would be based on research undertaken during the initial stages of the project.

The second component of the proposed project is training in communication for the U.S.-based and national PVO community as well as the MPSSP. Training activities would be carried out directly by the AED advisors with support from local consultants and staff from participating PVOs. The project proposes to focus on training four levels of staff: communication managers working at headquarter level; supervisors at the

regional level; auxiliary nurses; and community-level workers and volunteers who deal directly with the target populations.

The Assessment team's recommendations, as well as the preliminary draft of the nutrition communication project proposal were discussed with the Mission at the end of the Needs Assessment.


MADRE DE DIOS
BOLIVIA
SANTA CRUZ
TARIJA
PARAGUAY
ARGENTINA
TROPIC OF CAPRICORN
Antofagasta

LIST OF ABBREVIATIONS

AED	Academy for Educational Development
ASONGS	Association of Non-Governmental Organizations Working in Health
OMS/OPS	World Health Organization/Panamerican Health Organization
CIEC	Interdisciplinary Center for Community Studies
CII	Integrated Children's Center
CIL	Infant Milk Center
CITA	Center for Food Investigation and Technology
CM	Mothers' Club
CONCAISE	Coordinating Committee for the Integration of Activities for Health and Education
CPS	Popular Health Committee
CRS	Catholic Relief Services
DMI	Bureau of Maternal and Child Health
DMS	Dirección de Mobilización Social
DNNA	National Bureau of Food and Nutrition
EPM	Energy-Protein Malnutrition
FAO	Food and Agriculture Organization
FENASONGS	National Federation of Associations of Non-Governmental Health Organizations
FHI	Food for the Hungry International
GM/P	Growth Monitoring and Promotion
IBSS	Bolivian Institute for Social Security
IEC	Information Education Communication
INAN	National Institute of Food and Nutrition
JC	Neighborhood Councils
KAP	Knowledge, attitudes, and practices

LIST OF ABBREVIATIONS (cont'd)

MACA	Ministry of Agricultural and Cooperative Affairs
MCH	Maternal Child Health
MFM/FFH	Meals for Millions/Freedom from Hunger Foundation
MPC	Ministry of Planning and Cooperation
MPSSP	Ministry of Social Welfare and Public Health
OFINAAL	National Office of Food Aid
OPG	Operation Program Grant
ORT	Oral Rehydration Therapy
PAHO	Pan American Health Organization
PCI	Project Concern International
PP	Project Paper
PRITECH	Technology for Primary Health Care Project
PVO	Private Voluntary Organization
REC	Rotating Executive Committee
RPS	Community Health Officer
SCF	Save the Children Federation
SOMARC	Social Marketing for Change
SVEN	National Nutritional Status Surveillance System
TA	Technical Assistance
UMSA	Medical University of San Andres
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's Fund
U.S.A.I.D.	United States Agency for International Development
WFP	World Food Program

NUTRITION EDUCATION/COMMUNICATION NEEDS ASSESSMENT, BOLIVIA

I. INTRODUCTION

At the invitation of U.S.A.I.D./Bolivia, and based on the recommendation of an earlier Reconnaissance Visit (January 1988), the Academy for Educational Development (AED) conducted a Nutrition Education/Communicaiton Needs Assessment March 7-25, 1988. The team was composed of Peggy Koniz-Booher, Latin American Coordinator for AED's Nutrition Education and Social Marketing Project; Charles H. Teller, Nutrition Expert from the International Nutrition Unit of Logical Technical Services (LTS); Fernando Rocabado Q., Head of the Nutrition Surveillance Program of the Ministry of Social Welfare and Public Health (MPSSP); and Martha Clavijo T., Nutrition Program Director of Meals for Millions/Freedom from Hunger Foundation (MFM/FFH). Margaret Parlato, Director of AED's Nutrition Education and Social Marketing Project joined the team during the third week.

Because there has not been a major nutritional status study in Bolivia since 1981 and because the draft of the U.S.A.I.D. Child Survival background paper did not deal in great depth with the issue of nutritional status and priorities, the U.S.A.I.D. mission arranged to fund an analysis of recent nutrition data as part of the Assessment. Drs. Rocabado and Teller reviewed existing nutritional studies and growth data to provide a sound framework for selecting priority nutrition problems, and designing communication activities. Available economic, socio-cultural data, as well as development indices, were also reviewed to identify factors associated with high levels of malnutrition. This analysis provides essential information for targeting regions of the country and population groups most seriously affected for which appropriate nutrition interventions need to be designed. The review of nutritional data should prove to be a valuable planning document for organizations working in health and nutrition. A copy of this review can be found in Appendix A.

The U.S.A.I.D. mission also funded Lic. Clavijo to help coordinate the Assessment team logistics and conduct a survey of the nutrition communication needs and capabilities of the 10 U.S.A.I.D.-supported Private Voluntary Organizations (PVOs) involved in Child Survival projects in Bolivia. The findings of this survey are attached in Appendix B.

In addition to a comprehensive review of nutritional issues, the Assessment team:

- reviewed current and planned nutrition programs for their potential to support future nutrition communication activities;
- examined major information, education and communication (IEC) campaigns/programs in health, population and nutrition as well as other efforts to change behavior;
- identified potential communication channels for nutrition information in the country;
- assessed in-country resources for nutrition, market and social science research; and other research capabilities needed to develop appropriate nutrition messages;
- reviewed in-country capabilities for the production of print materials, radio and television programs.
- studied institutional impediments to creating sustainable IEC planning and execution capability;
- identified technical and financial assistance needs in nutrition IEC of local institutions; and
- assessed the relative merits and feasibility of implementing each of the four project options developed during the January AED Reconnaissance Visit.

II. NUTRITION POLICIES

Since 1976, there have been a series of multisectorial food and nutrition plans developed with the support of U.S.A.I.D., UNICEF and PAHO. With the political and economic disturbances of the past nine years, none of the plans have been put directly into practice. More recently, the Bolivian government as part of the Andean Pact (Acuerdo de Cartegena), has initiated the development of a Food Security Plan to protect against food scarcity, and created an office in the Ministry of Agriculture (MACA) to formulate this plan.

The country's present nutrition policy is the Food and Nutrition Strategy presented in the Ministry of Health's Three Year Health Plan (1987-89). This policy has a primary health care emphasis which focuses on intersectorial coordination, the decentralization of services and the extension of coverage through the mobilization of community health committees and mothers' clubs. Five basic action areas are identified:

- increasing food availability and consumption;

- rehabilitation from undernutrition and specific nutrient deficiencies;
- improving biological utilization of food;
- maintaining a permanent nutritional surveillance system with adequate and timely follow-up action; and
- improvements in food behavior.

Of particular significance to future nutrition education efforts is the Three Year Health Plan's emphasis on the need to stimulate social participation and mobilization efforts at the community level as well as carry out education and popular training in health. Areas singled out for priority attention are: the development and implementation of infant care centers and milk distribution centers; the promotion of breastfeeding and weaning; support for family and commercial gardens; monitoring of child growth and development; the prevention and control of anemias and other nutritional deficiences among pregnant women and children under five; and the control of endemic goiter.

As discussed in the report summarizing the January AED Reconnaissance Visit, there is considerable support for nutrition. International agencies including U.S.A.I.D., the World Bank, UNICEF, and PAHO have given renewed prominence to nutrition problems and highlighted the need to give nutrition interventions a high priority. The deteriorating nutritional status of the population has focused attention on the need to develop sound nutrition interventions. Both the Ministry of Health (MPSSP) and the U.S.-based Private Voluntary Organizations (PVOs) are integrating nutrition as a central element in their Child Survival programs. The responsibility for both growth monitoring and breastfeeding promotion programs of the MPSSP was transferred in 1987 from the National Bureau of Food and Nutrition (DNNA) to the Bureau of Maternal and Child Health (DMI), thus permitting the planning and implementation of a more unified Child Survival program.

Nutrition programs have been given a big boost recently by various measures taken to standardize and unify technical norms and procedures used by the various bureaus of the MPSSP and PVOs for nutrition programs. For example, in January, 1988 a National Workshop on Growth Monitoring and Promotion (GM/P) was organized by the U.S.A.I.D.-supported PVO Subcommittee on Health and Nutrition in collaboration with the MPSSP. As a result of discussions initiated at this workshop, recommendations were made for PVOs to employ the same growth card and other standard norms and procedures as the Ministry and to work jointly to strengthen training, supervision, logistics and information system capabilities in this program area. It is hoped that similar efforts will

be taken to establish standards in other key areas such as maternal nutrition, breastfeeding and vitamin A.

III. NUTRITIONAL STATUS

A. BASIC HEALTH INDICATORS

While the three basic indicators of health status (life expectancy, crude death rate and infant mortality) have improved since 1950, there is some evidence (documented in the U.S.A.I.D.-Bolivia epidemiological assessment, December 1987) that improvements have leveled off in the 1980s. Life expectancy is now estimated at 48 years; the crude death rate stands at approximately 17 per 1,000 and the infant mortality rate at 124 per 1,000. Two other mortality rates, which are closely affected by malnutrition, are very high: the child mortality rate is 37 per 1,000 and the maternal mortality rate is 48 per 10,000 live births. Regional differentials analyzed from the 1976 Census data indicated that the highest infant mortality rates are located in the Quechua-speaking rural areas of the Valley Regions (252 per 1,000). The highest infant mortality rates in urban areas are found in the Aymara-speaking Altiplano.

B. NUTRITIONAL STUDIES AND DATA

A major effort has been made during this Assessment to collect all available recent data on fluctuations in the country's nutrition situation, according to time, socio-cultural and ecological conditions. The main sources of data are the 1981 National Nutrition Survey and the National Nutritional Status Surveillance System (SVEN) begun in 1986. The SVEN is based on the systematic reporting of data generated in growth monitoring sessions. Over 80,000 children under five years of age from around the country are presently included. Data from the recently initiated Primary School Height Census will be forthcoming and incorporated in future planning efforts.

A number of small area studies, the majority of which were conducted since the 1981 National Survey, were also reviewed. The more recent ones include:

- UNICEF-sponsored studies in depressed rural communities (1984-85);
- Save The Children Vitamin A study in Inquisivi Province (1987);
- Project Esperanza's knowledge, attitudes, and practices (KAP) study in the Chaco (1986);

- ORSTOM/INAN (1986-88) study in four communities;
- Two MPSSP national studies of Endemic Goiter (1985, 1988)
- MPSSP malnutrition study in the severely flooded areas around Lake Titicaca (1986); and
- MFM/FFH and CARE epidemiological analysis of growth monitoring data (1987-88).

While a separate report has been prepared by Dr. Rocabado (Appendix A) analyzing these studies, the main findings are summarized below and their implications for the development of a nutrition communication project are discussed.

In addition to existing studies and data, the team analyzed data from growth monitoring cards collected during field visits to PVO project sites in rural La Paz and Tarija and to MPSSP facilities in La Paz, Cochabamba and Tarija. The individual growth cards were sorted by ecological and socio-cultural factors. These data were analyzed to identify malnourished populations in the geographic areas of greatest poverty and child mortality.

C. PRIORITY NUTRITION PROBLEMS

According to the studies and growth data reviewed, the following are priority problems:

Energy-Protein Malnutrition

There is broad concensus among Bolivian experts that the major nutrition problem in the country is energy-protein malnutrition (EPM) in children. According to the National Nutritional Survey of 1981 (Table 1, Appendix C), 41.0% of children under five suffer from chronic undernutrition. Children 6-23 months of age are the most affected. Prevalence of malnutrition is highest in rural areas of the Altiplano and the Valles, and in peri-urban El Alto.

Unfortunately, there are very little data on trends in malnutrition since 1981. The only available longitudinal analysis comes from 1983-1986 growth monitoring data on 2,000 children under five belonging to 18 Mothers' Clubs in the La Paz area. According to the data, the prevalence of malnutrition (under the third percentile of WHO International Reference Values) was just under 20% in 1983, rose to 30% in 1985 and then declined to around 20% in 1986 (Table 2, Appendix C). While there might have been some change in the socio-economic factors affecting the children being weighed (which could

explain some of the changes in the prevalence of malnutrition), the data reflect the general opinion that 1985 was the worst of the crisis years and that the situation has improved.

Endemic Goiter

The high prevalence of endemic goiter from iodine deficiency is considered the second most serious nutrition problem. The general prevalence is 60-65% (Table 4, Appendix C). Deficiency is highest in females, school children and young adults, in the lowest social classes and in high-valley and mountainous regions (more than on the Altiplano itself). Neurological problems such as deafness and cretinism are the major consequences.

In the Department of Chuquisaca, where the indices are the highest, recent studies by DNNA have shown that 80% of the population has some visible signs of goiter. The prevalence of cretinism has been shown to range between 1.5% and 16%.

Other Micronutrient Deficiencies

There is conflicting evidence on the relative public health importance of both iron deficiency anemia and Vitamin A deficiency. This is a priority area for further research. The most recent anemia study was conducted by the National Institute of Food and Nutrition (INAN) and the University of San Andres (UMSA) in 1987. Adjusting for different cut-off points by altitude, the study shows that around 20% of young children and pregnant women suffer from anemia, with higher rates in the valleys and lowlands. The greater prevalence in the tropical regions is believed to be more the result of parasitic infection than of dietary deficiency.

The few existing data on Vitamin A deficiencies are inconclusive. Epidemiological studies with clinical tests reveal pockets of Vitamin A deficiency, while dietary surveys show the problem might be more widespread. A recent study conducted for Save the Children Federation in Inquisivi Province found that 3.8% of rural respondents and 1.1% of urban respondents self-reported night blindness. Clinical indicators such as Bitot's Spots and Xerosis were close to the WHO prevalence criteria for determining the extent of Xeropthalmia (XN more than 1%, Bitot's spots more than 0.5% and Xerosis in more than .01% in preschool age population). Unfortunately, the attempt to use the new impression cytology method failed in the laboratory analysis stage and could not be used.

D. CAUSES OF MALNUTRITION

Comprehensive studies have not been done on the underlying causes and determinants of energy-protein malnutrition in children. Factors contributing to malnutrition in children under 24 months are the least well-documented. Those found associated with EPM in existing studies include:

- frequent illness (diarrhea and respiratory infections);
- inadequate and insufficient food supplementation during weaning (late introduction of solids, substitution of modern lower quality foods, infrequent feedings);
- poor hygiene and environmental sanitation;
- inadequate resources (purchasing power, land tenure, under-employment);
- weakening of the family and community social support network;
- acculturation and social change (migration, inadequate child care, female labor force participation, dietary habits);
- maternal malnutrition (insufficient caloric intake, tuberculosis, malaria, anemia);
- inaccessibility to basic preventive and curative health services; and
- declining duration of breastfeeding in the city of La Paz to less than one year and early introduction of artificial milk.

E. FOOD AVAILABILITY AND CONSUMPTION

Bolivia has the lowest per capita availability of calories on the Latin American continent. According to the latest (fifth) World Food Survey, the food balance sheet for Bolivia in 1984 was 2088 calories per person per day. The MPSSP calculates that the per capita caloric requirement of the Bolivian population is 2232, resulting in a deficit of 120 calories per person per day. Even assuming equitable distribution of food and no losses in storage and distribution, this would mean that only 94% of the country's caloric needs are currently being met. The balance sheet availability of proteins, on the other hand, is adequate, reaching 103% of requirements. However, the principal sources of protein are of vegetable origin, and with the existing caloric gap, part of the protein supply is inefficiently utilized for meeting energy needs.

The problem of food availability, becomes more serious when direct estimates of food consumption are considered. Almost all of the household food consumption surveys document caloric adequacy of only 80%. Even lower levels have been found in La Paz

(67%) and in depressed rural areas of Oruro, Potosi and Chuquisaca (57%). The lowest levels of adequacy were found in children under five years of age, followed by pregnant and lactating women.

Unfortunately, there has been very little study of the adequacy of food consumption during the prolonged weaning period. The 1978 Edozien study in Cochabamba found that the principal solid foods given during this period are cooked potatoes, bread, and soups (mainly of rice, maize flour and peanuts). The consumption of milk was found to diminish gradually after the first year with very deficient intake levels in older children. Subsequently, the 1984 UNICEF study in depressed areas confirmed the earlier findings of inadequate consumption of calories, proteins and iron among young children. The study documented that 61% of children between one and five years of age consumed less than 60% of the recommended caloric allowance.

The recent economic crisis has certainly affected the nutritional status of vulnerable groups. The cost of the basic family food basket in relation to salaries has risen sharply in recent years. In May 1987, the cost was US$231 a month for a typical five-member family, an increase of 340% since 1985 and of nearly 500% since 1983. The minimum salary in 1987 was US$24 per month, or just 10% of that needed to meet the basic caloric needs of the family.

It has been observed that in the process of urbanization with its consequent social changes, the traditional foods such as quinua, maiz, tarhui and beans are being substituted for newer foods of lower nutritional quality such as noodles, bread, rice, sugar and sodas. The 1985 INAN/ORSTOM study of food consumption and family income noted the progressive disappearance of "inexpensive" calories such as barley, quinua and dried beans. The price of other traditional staples such as potatoes and chuño rose considerably between 1975 and 1983. Consequently these foods became known as "expensive" calories. In their place the national and imported cereals, sugar, cooking oils and fats have become the "cheaper" calories.

F. CHARACTERISTICS OF MALNOURISHED POPULATIONS

The AED Assessment team applied a socio-ecological classification method to categorize the population groups that have the highest risk of malnutrition. This method enabled the team to map out the spatial distribution of these populations, thus facilitating the identification of target groups for nutrition communication programs. This type of descriptive analysis discloses relatively homogeneous socio-ecological groups

living in close proximity which, if sensitized and mobilized, can actively participate in systematic efforts to ameliorate their own nutritional problems.

This method was applied by the Assessment team to the diverse socio-ecological conditions of the Bolivian population using data from the National Nutrition Survey of 1981, the National Nutritional Surveillance System, the National Elementary School Census of height, and the Information Systems of CARE, MFM/FFH and Save The Children. The following classifications were used:

- geographic region and urban/rural location (Tables 1 and 2, Appendix C);
- department and priority provinces for U.S.A.I.D. Child Survival Project (Table 4, Appendix C); and
- department, ecological zone and physical accessibility to major town or city (Table 5, Appendix C).

The preliminary findings of the socio-ecological classification indicate that the communities located in the Puna and high-valley areas of Cochabamba, La Paz (Inquisivi Province) and Tarija, have the highest prevalence of malnutrition in their Departments, nearly twice the rate of the lower-valley Yungas areas. Within the Valley of Cochabamba, the towns farthest from the capital city have rates nearly twice that of the more central towns. The capital cities and major towns have the lowest recorded prevalence. The principal exception is the rapidly growing city of El Alto, above La Paz. The prevalence of malnutrition in El Alto is over 20%, higher than many of the smaller Altiplano towns. This is a situation that merits special attention.

The high-priority nutrition problem areas selected through the methodology discussed above, were further screened to identify those most suitable for a communication project. Additional factors deemed important are the following:

- departments expected to be targeted by the U.S.A.I.D./MPSSP Child Survival Project now in the design stage;
- provinces with the highest levels of poverty;
- provinces with a sufficient population size (over 30,000 people);
- provinces relatively accessible to the departmental capital; and
- provinces in which at least one U.S.A.I.D.-supported PVO is actively working in Child Survival projects.

Based on these criteria, a list of Provinces in five Departments (La Paz, Cochabamba, Chuquisaca, Potosi and Tarija) was generated. In Table 4, Appendix C, 17

provinces within those five departments are identified as having a high prevalence of under-five energy-protein malnutrition (under the third percentile of WHO International Reference Values). This list will be referred to later as the basis for the selection of field project sites for future nutrition communication activities.

In general, all available data suggest that the causes of serious growth retardation in the under-ones is likely to be different from those affecting growth in the over-one group. Nutrition experts in Bolivia, interviewed during the Needs Assessment, hypothesize that infections are related to early growth faltering and that overall food availability in the family may be a key factor affecting the growth pattern of the older children (12-23 months). These issues need to be carefully explored before program resources and populations are targeted and before effective educational programs and messages can be designed.

IV. NUTRITION RESEARCH AND SURVEILLANCE NEEDS

It is evident from the review of existing studies that there is a lack of descriptive information on trends in nutritional status; and differentials among age and geographic areas; and that little is known about the specific, immediate factors causing infant malnutrition. This seriously hampers efforts to plan appropriate nutrition interventions and educational activities. Well-focused, nutrition research will, therefore, be critical for planning an effective nutrition education/communication project. The need for coordination between U.S.A.I.D. and other donor agencies in Bolivia will be especially important in the research area in order to create an adequate information base. Special emphasis needs to be placed on sharing technical and financial resources in support of future research activities related to nutrition education/social marketing efforts.

There are five types of nutrition research needs that have been identified through the current review of the literature: socio-ethnographic, epidemiological, evaluative, operational, and surveillance.

A. SOCIO-ETHNOGRAPHIC

As discussed above, existing data on nutritional status indicate that energy-protein malnutrition, manifested by growth retardation of children 6-23 months old, is the major nutrition problem in the country, yet there has been very little multidisciplinary research on the causes of poor nutrition in this age group. For nutrition

education projects it is important to obtain answers to questions on the factors influencing infant malnutrition, such as: food availability and patterns of intra-family food distribution; the incidence of diarrhea infection, hygiene and health care practices; and childcare habits, behaviors and practices that inhibit growth. Both qualitative and quantitative methods are needed to generate practical information for use by program planners.

B. EPIDEMIOLOGICAL

Nutrition issues other than energy-protein malnutrition and goiter, have not been well-documented in terms of their incidence and geographic distribution. Two potential problems in need of further study are low birth weight and vitamin A deficiency. There are few studies and those that exist show conflicting findings. Both nutrition topics are of current high interest on the part of the government and PVOs. Iron-deficiency anemia and declines in urban breastfeeding duration have been identified as problems but their prevalence and severity have not been documented. Epidemiological research on the nature, magnitude, distribution and associated risk factors of key nutritional problems is essential for planners to identify target audiences and develop concrete educational messages. It will be especially important to obtain such information in the geographic areas targeted by the U.S.A.I.D. Child Survival Project and the proposed AED project.

C. EVALUATION

One of the research needs identified is that for thorough program evaluations. Unfortunately, even the prototype nutrition-education project conducted earlier in Bolivia -- Buena Madre -- did not have a formal impact evaluation. There are, consequently, few guidelines for future educational efforts. When conducted, evaluations have been instrumental in the improvement of programs. Fundación San Gabriel's 1986 evaluation (unpublished) for example, found that their nutrition program was having little impact and was the stimulus for radical re-orientation of the intervention. The PRITECH/CARITAS Proyecto Mejoramiento Infantil, found the 1987 mid-term evaluation useful in strengthening the project's growth monitoring component. Other U.S.A.I.D.-supported Child Survival PVOs are currently carrying out mid-term process evaluations, but most will have difficulty evaluating nutrition impact because of a lack of clearly defined, quantitative nutrition targets and, lack of adequate baseline data and ongoing information systems. Thus, it is highly recommended that the next major nutrition IEC interventions include an evaluation component.

D. OPERATIONAL

The U.S.A.I.D. Mission has found that timely operational studies can help resolve problems in ongoing nutrition programs. For example, a September 1987 assessment of growth monitoring/promotion (GM/P) programs showed that the MPSSP and many of the PVOs were experiencing implementation difficulties. The major operational problems identified were insufficient standardization of some of the technologies, weak linkages with other child survival interventions, inadequate training, low quality of key task performance, and lack of, or inappropriate/insufficient programmatic response to identified growth retardation. Based on this assessment, the PVOs carried out operations research to find solutions to these problems. In January 1988, a National Seminar on GM/P was carried out to address these issues. The majority of PVOs who participated in the operations research activities have used the results to modify and improve their GM/P programs (e.g., Freedom from Hunger, CARE, CARITAS, Save the Children, and Food for the Hungry.)

E. SURVEILLANCE

The National Nutritional Status Surveillance System (SVEN) in Bolivia is one of the few such systems functioning in Latin America, and has the potential to provide updated nutrition information to help the MPSSP and PVOs plan and monitor their nutrition activities at the local level. The SVEN, which began in 1986, is already reaching 100,000 children under five, and publishes a useful monthly bulletin. Review of the information system in the field shows that there is inadequate data quality control and that more training and supervision is needed for those collecting the data. Sentinel areas could be identified and provided this support. Most of the ten U.S.A.I.D.-assisted PVOs are collaborating with the Ministry's SVEN by filling out the reporting form, but without much data analysis or subsequent utilization. Some PVOs, such as CARE, CARITAS and Save the Children are developing their own computerized, health information system and have not as yet systematically incorporated nutritional status or growth data. The PVOs may need technical support to make better use of their baseline and growth monitoring data for planning and evaluation, and for feedback to the community.

A new activity of the SVEN is the National Height Census of first grade children. The census, initiated in November 1987, has covered the urban schools of La Paz, Cochabamba and Tarija, but has yet to start work in the rural areas where the need is

greatest. Data from this source will be very useful in identifying high-risk areas for future nutrition education programs. INAN is incorporating the data from SVEN into its own multisectorial Food and Nutrition Surveillance System (SISVAN), which will form the basis of an updated diagnosis of the food and nutrition situation in the country.

An ongoing source of information on food consumption is also presently lacking in Bolivia. The food consumption survey to be carried out by the National Statistics Institute (INE) in 1988 should provide an update on the situation. The study, planned as part of a national survey, will cover 5,400 households. Although it will take time to analyze the data, preliminary tabulations should be available for use by AED in planning a nutrition education project.

V. INSTITUTIONAL FRAMEWORK FOR MANAGING NUTRITION IEC

A. OVERVIEW OF THE HEALTH/NUTRITION SECTOR

In the early 1980s, it was widely recognized that the coverage of health care in the country was quite low. The World Bank estimates that the MPSSP reaches 30% of the population, the Bolivian Institute for Social Security (IBSS) another 25%, and the private sector between 5 and 10%. Thus at least one-third of the population is not covered, and it is possible that, in effect, more than 50% do not have regular access to modern health care.

Recent reports by the World Bank and U.S.A.I.D. have documented the social, economic and political problems which have hampered creation of a strong Ministry of Health in Bolivia. The current public sector health care delivery system is complemented by a large number of private, non-governmental and community organizations which play a key role in providing services, especially in the rural areas. Traditional medicine continues to be an important force in a country where over one-half of the peri-urban and rural populations are without ready access to modern health care.

The five main groups that provide health care and thus provide an institutional framework for managing nutrition information, education, communication activities are:

- government institutions, mainly the Ministry of Public Health (MPSSP), the Ministry of Planning and Cooperation (MPC) and the Office of the Presidency (Emergency Social Fund and the National Office of Food Aid);

non-governmental organizations (PVO-REC and FENASONGS);

- private enterprises and establishments (health consultants, private practitioners, traditional healers); and
- community associations including Mothers' Clubs, Neighborhood Councils, and Popular Health Committees (Comites Populares de Salud).

Two important changes are now taking place in the health sector that could radically improve the performance of the MPSSP. The first is the decentralization of health service management and delivery which will give the Regional Development Corporations and Municipalities responsibility for health at the regional level. The second change is the government's new policy to encourage the PVOs to play a major role in expanding coverage to less accessible populations. These changes have important implications for planning a Nutrition IEC project and underscore the need to work closely, not only with the national-level MPSSP, but also with PVOs and local government.

The new plan, calling for sweeping reorganization of the government's health and education system, was announced in March during the Assessment visit and was subsequently approved in April. The plan reduces the responsibilities of the central MPSSP to that of planning and technical direction. The plan transfers management of urban health services from the Regional Health Offices (Unidades Sanitarias) to the Municipalities (Alcaldias) and that of rural services to the Regional Development Corporations. Similar decentralization will take place in the education sector. The plan has generated considerable consternation both in La Paz and at the Unidad Sanitaria level. Given the uncertainty about the management capability and planned resources that will be available in different areas of the country, the assessment team decided to postpone making final recommendations about sites for a nutrition communication project.

B. PROFILE OF NUTRITION PROGRAMS AND ACTIVITIES

1. Government institutions

1. MPSSP

As mentioned earlier, there are two bureaus within the MPSSP that are currently responsible for planning nutrition programs and setting technical norms and standards. The Bureau of Maternal and Child Health (DMI) has recently taken charge of growth monitoring and breastfeeding and is integrating these programs with other Child Survival

activities. The National Bureau of Food and Nutrition (DNNA) has the planning and normative responsibility for the ongoing MPSSP nutrition programs: Integrated Children's Centers (C.I.I.); Infant Milk Centers (C.I.L.); protection of breastfeeding; food supplementation; promotion, development and implementation of family and community gardens; nutrition within institutions; anemia prevention and control; and control of endemic goiter. Under the decentralization plan it is likely, that these two MPSSP bureaus will be joined together under a new "Bureau of Family Health."

Currently most of the responsibility for nutrition programs at the operational level lies with the DNNA and the MPSSP nutritionists at the regional health office level. However, more than one-half of the eleven regions do not currently have their nutrition position filled. At the health-area level, there are no nutritionists and, consequently, the key person responsible for nutrition is the auxiliary nurse. These nurses have many other basic health-service tasks and therefore have little time for the many educational and community-level tasks essential to a nutrition program. The Regional Health Office of La Paz, with its five nutritionists, is probably the only one which conducts most of its planned nutrition activities.

The Department of Social Communications of the MPSSP has recently been assigned the pivotal and difficult role of coordinating the development of all nutrition and health education messages, materials and communication campaigns for the MPSSP. In the past, UNICEF and PAHO have generally worked directly with individual Bureaus in the execution of IEC efforts focusing on strengthening the role of Popular Health Committees and volunteer Community Health Officers (RPSs) in the control of goiter, diarrhea, nutritional anemias, respiratory diseases, tuberculosis and the promotion of oral rehydration therapy and vaccinations. It is the Ministry's intention, however, that all future educational activities be handled by the Department of Social Communications to assure greater control and consistency of messages and the better utilization of scarce resources for materials and media development. To date, this mandate has met with some resistance on the part of the individual Bureaus because of the concern that this small and somewhat fragile department cannot possibly meet the growing demand for services.

2. INAN

The National Food and Nutrition Institute (INAN), part of the Ministry of Planning and Coordination (MPC), is the second major government organization working in nutrition. Begun in 1979, its main objectives are to:

- analyze the country's nutrition problems and their causes;
- evaluate the nutritional impact of sectorial policies in health, agriculture and education;
- explore on a pilot level different multisectorial programs;
- train personnel; and
- disseminate new knowledge and ideas.

INAN's main contribution has been the National Nutrition Survey of 1981 and studies on goiter and breastfeeding. INAN, like many other institutions, has suffered from frequent changes in leadership and now receives only a modest annual operating budget. Recent studies have been quite small in scale. Major ongoing activities include the organization of and training for the multisectorial Food and Nutrition Surveillance System (SISVAN) and the design of a food consumption component for the National Household Survey to be carried out by the National Statistics Institute.

INAN has also recently undertaken a number of nutrition IEC activities. This is seen by many orgnizations contacted as a departure from its mandate to conduct nutritional research and surveillance. Over the last two years in particular, INAN has, with the support of the Food and Agriculture Organization (FAO), developed a number of audiovisual materials (slide programs and videos), flipcharts, recipe books and assorted handouts for its community project work in the Altiplano. INAN is presently planning an impact study of the nutrition education materials developed during a U.S.A.I.D.-sponsored workshop in Oruro in 1987 (the materials have not yet been widely distributed). If funded, the study would entail training of community health promoters in how to use the materials, trial of the materials in designated villages; and execution of knowledge/attitude and practices (KAP) surveys before and after the introduction of the materials.

3. OFINAAL

Another organization working in nutrition is the National Office of Food Aid (OFINAAL), a dependency of the Presidency of the country. OFINAAL was created in 1983 to manage the internal distribution of donated food on behalf of the government.

OFINAAL presently manages the distribution and administration of most of the World Food Program and the European Economic Community Program. The U.S.A.I.D. PL-480 Program is administered separately. According to a recent World Bank assessment, OFINAAL is relatively new and presently lacks the financial and technical resources and experience required to properly administer and supervise maternal and child health supplemental food programs, pre-school feeding and food-for-work projects.

4. School of Nutrition

The Medical School of the National University (UMSA) has a School of Nutrition and Dietetics (Carrera de Nutricion y Dietetica), a five-year program leading to a degree in either nutrition or nutrition education. There are 5-8 students graduating each year, a few of whom write theses. In the past, students have participated in a variety of nutrition studies and are potential trainees for research work nutrition education program.

Non-Governmental Organizations

1. FENASONGS

During the Needs Assessment, the non-governmental organizations working in health were found to play a key role in the delivery of nutrition services, especially in the rural areas. Among the non-governmental organizations working in Bolivia, there are two major entities, both formed in 1987. One is the National Federation of Associations of Non-Governmental Health Organization (FENASONGS) composed of both local and international PVOs. The first major institutional project of FENASONGS is a survey of all its members, highlighting current activities and needs. The survey, to be completed by the middle of April, should also prove to be a valuable organizing and coordinating tool. Regional associations of PVOs, called ASONGS, have now been established in several departments (La Paz, Santa Cruz, Chuquisaca and Cochabamba). The objective of these ASONGS is to promote primary health care projects, disseminate information and coordinate training and resources within their respective regions. One of the Bolivian-based members of the La Paz ASONG, the San Gabriel Foundation, is particularly interested in collaborating in the development and execution of a nutrition communication project. The Foundation is currently involved in nutrition and health IEC activities through neighborhood associations, Mothers Clubs, and other groups in the marginal barrios of La Paz and its peri-urban areas.

2. PVO-REC

The other major non-governmental organization is the PVO network, currently known as the PVO-REC (Rotating Executive Committee) composed of the 10 US-based PVOs which receive Child Survival funding from U.S.A.I.D. They have recently organized and obtained $1.6 million in funding through an Operating Program Grant (OPG) in order to strengthen the coordination, planning and technical quality of their projects. The operational structure of the PVO network involves a secretariat which will coordinate the activities of four cells: administration; technical assistance in multisectorial and community development activities; technical assistance in health; and programming and evaluation. It is anticipated that nutrition activities will be covered under the health cell. Prior to receiving the OPG, the PVO-REC formed a Technical Subcommittee in Nutrition which carried out an assessment of the nutrition components of PVO projects (September, 1987) and organized the National Conference on Growth Monitoring and Promotion discussed earlier.

While it is currently estimated that 200-300 non-governmental organizations (domestic and international) are working in health-related activities in Bolivia. U.S.-based PVOs are amongst the largest in terms of population coverage and financial resources. U.S.A.I.D. provides approximately $10 million in Child Survival and other grant monies to the PVOs participating in the new PVO network. The ten U.S. PVOs in the network are: CARITAS-Boliviana, Catholic Relief Services (CRS), CARE, Save the Children Federation (SCF), Project Esperanza, Foster Parents Plan (Plan), Andean Rural Health, Meals for Millions/Freedom from Hunger (MFM/FFH), Project Concern International (PCI), and Food for the Hungry International (FHI). FHI is the only PVO not currently receiving Child Survival money. PRITECH (Technology for Primary Health Care Project), which has been working primarily with CARITAS/CRS over the last two years has provided technical and educational support in GM/P and the control of diarrhea, and has played an advisory role to the PVO-REC since its conception.

3. Survey of PVO Needs in Nutrition IEC

The following summarizes the major findings of the PVO Nutrition Education/Communication Needs Survey conducted by the Assessment team (Appendix B). The findings are complemented by information from interviews and field observations (discussed in greater detail later). According to the survey, all of the PVOs are now involved in or are in the process of planning nutrition IEC programs and activities. These efforts include the delivery of educational messages and the use of traditional educational materials in the promotion of breastfeeding, appropriate infant

feeding practices, and use of iodized salt.

MFM/FFH, FHI and SCF are the only PVOs with nutritionists on staff. Although several PVOs have health educators, CARITAS, Plan and PCI are the only ones that have personnel with experience or training in social communication, including the development and targeting of educational messages and materials. The majority of PVOs rely heavily on free materials distributed by the MPSSP or by their home office in the U.S. (produced in other countries). Recently, flipcharts and other materials developed by CARITAS with technical assistance from PRITECH have been made available at cost to Bolivian PVOs. While these materials are highly appreciated, many PVOs find the cost prohibitive.

The PVOs surveyed identified the following areas where they require individual technical assistance:

- design and execution of formative research for the development of educational messages/materials;
- development of communication strategies that successfully integrate interpersonal communication methods and mass media;
- training of trainers in the delivery of educational messages and use of educational materials in the field by health promoters, RPSs, rural teachers, etc.;
- development and use of "non-conventional" education materials (puppets, social dramas, videos and storytelling rather than posters, slides and flyers);
- development of educational materials/messages for specific rural audiences within their projects;
- collection and analysis of data related to growth monitoring/promotion;
- ethnographic research;
- development of information systems;
- use of mass media and other techniques of communication appropriate for their program;
- evaluation of their educational programs; and
- establishment of norms and procedures related to nutrition and nutrition education.

The PVOs interviewed expressed interest in collaborating with one another in communication activities and also in sharing education materials that might be produced jointly.

Private Sector and Traditional Health Providers

Private physicians, clinics, and hospitals play a small role in the delivery of nutrition and health care services in Bolivia, especially in the rural areas of the country. Current estimates are that less than 5% of health services are provided by this sector. Given the present economic conditions, it is unlikely that the role of this sector will increase significantly in the next five years. Private sector physicians, however, play an influential role in setting standards and trends in child-feeding practices and should be actively involved in nutrition education.

Traditional medicine continues to be an important force. For the peri-urban and rural populations without ready access to modern health care, traditional healers (along with auto medication) play a significant role. Nutrition education interventions would be strengthened by utilizing this network to reinforce positive indigenous practices and by making constructive use of traditional beliefs.

Community Groups

In recent years, the MPSSP has placed strong emphasis on the utilization and expansion of community organizations for the development of a primary health care system and execution of related communication activities. Popular Health Committees (Comites Populares de Salud) headed by a Volunteer Community Health Officer (Responsable Popular de Salud) working in alliance with the area public health staff, Mothers' Clubs (Clubes de Madres) and Neighborhood Councils (Juntas Vecinales) all play key roles in the delivery of health services, especially in the peri-urban and rural areas. With the decentralization/regionalization of health services, these community groups are expected to play an even more active role than they have in the past. The Committees, for example, are expected to collaborate in the identification of priority health problems and to help mobilize materials, and financial and human resources to expand and operate the primary health care system. There is evidence that these groups can play a pivotal role in improving health and increasing community participation in preventive health care activities. The MPSSP/PAHO study of 1986 indicates that two-thirds of Mothers' Clubs and one-half of the Neighborhood Councils participated in immunization campaigns. Two-fifths of all community organizations surveyed were associated with some aspect of primary health care and oral rehydration therapy.

C. CURRENT IEC PLANS

Based on the MPSSP's Three-Year Plan, several bureaus and departments within those bureaus have developed specific plans which incorporate nutrition communication

components. The Bureau of Mobilization and Social Participation, for example, has developed, through its Department of Popular Education and Training in Health, a proposal to train community-level Responsables Populares de Salud -- RPSs throughout the country. Growth monitoring, promotion of breastfeeding, general food and nutrition, anemias, goiter and treatement of diarrhea are among the many topics slated to be covered during the 30-day training sessions. The MPSSP aims to have between 10,000 and 15,000 local Health Committees and their respective RPSs in operation by 1989. The overall social mobilization plan for health also calls for the involvement of parent associations, mothers' clubs, youth groups and trade unions, among others. The Department of Popular Education is currently planning to conduct an inventory of nutrition and health educational materials and to establish an archive for sample materials. This is an effort that donors should support.

The National Bureau of Food and Nutrition (DNNA), which has two main departments concerned with nutritional surveillance and supplemental feeding, has also proposed a program of food and nutrition education to correspond with the Ministry's Three-Year Plan. DNNA's strategy encompasses formal education, non-formal education and social communication (radio, audiovisual, print and alternative media). The methodology involves training personnel at the institutional level (nurses, physicians, agronomists, economists and social workers) using auto-tutorial instructional materials and active participation at the community level - applying what they call a "bottom-up" technique. The Bureau intends to work through a coordinating committee for the integration of activities for health and education (CONCAISE) and utilize the MPSSP's Department of Social Communication for the implementation of specific aspects of the program.

The Bureau of Maternal Child Health (DMI) has also developed its own model for a three year National Program of Popular Education in Health based on the participation of the community in health-related actions and educational activities. The Bureau's educational methodology stresses community participation and dialogue in the building of public consensus concerning nutrition and health issues. Major planned nutrition related interventions include monitoring growth and controlling goiter. In order to coordinate education/social mobilization activities among the various government bureaus and divisions, the Department of Social Communication has proposed setting up committees for planning, publication, operations, evaluation and administration composed of representatives from all the groups.

D. SELECTED FIELD OBSERVATIONS

During the three week Assessment, the members of the team visited several of the MPSSP's field programs in Cochabamba and Tarija, the team also visited the MFM/FFH project in Manco Kapoc Province of La Paz, and CARE's program in Arce Province, Tarija.

During the field visits, it was apparent that the MPSSP has limited operational capacity in the rural areas. The personnel in the Regional Health Units (Unidades Sanitarias), health centers and sanitary posts are few in number. They are poorly paid and often not on time, rarely supervised and infrequently trained. Little has been done to mobilize of community health committees (except in Potosi), and the activities of the Mothers' Clubs are often limited to monthly gatherings for the explicit purpose of receiving food handouts.

During the field visits it was also evident that PVOs, with the exception of CARITAS, reach small population groups and lack technical preparation in both social communication (except CARITAS) and nutrition (except MFM/FFH and SCF). One nutrition area in which the PVOs have made definite progress, however, is growth monitoring and promotion. For example, dialogue with the mother following the weighing of children, rather than a solely mechanistic approach to weighing and weight registry, was observed in the field.

Intersectorial and interagency collaboration at the Health Area level is highly desirable and is a priority of many of the PVOs working in Bolivia. Activities at the health-area-level in La Merced, in rural Tarija is an excellent example of what could be done in other areas of the country. CARE, CARITAS, the Ministry of Education and the MPSSP have coordinated activities.

The following nutrition activities were observed during the site visits: growth monitoring and nutrition counselling of mothers, home visits, nutritional surveillance, Mothers' Club and health committee meetings, community and home gardens, and school nutrition-education classes. Nutrition education materials, such as posters, flip-charts, manuals, slides, growth charts, calendars were also observed in use. Nutritional status and growth data were also collected, reviewed and analyzed during the site visits. Discussions and interviews were held with health program personnel, community health workers, authorities, teachers, leaders, traditional healers and members of health committees and clubs. A focus-group of five women with growth faltering children between 6-23 months of age was organized in one community, allowing the team to discuss directly with mothers their perception of the causes of growth retardation of

their children. Diarrhea and lack of appetite were most often blamed. These field visits and discussions reinforced the team's impression that the health and growth of children is viewed as a high priority among community members.

The field visit confirmed that there is currently a heavy emphasis on educational print materials provided by MPSSP/UNICEF with little training in targeting materials and messages to specific audiences. One PVO claimed that some of the educational posters produced through the Buena Madre program are still being used and adapted but none were observed in clinics or field headquarters. Laminas produced during the Oruro workshop have been purchased by PVOs, but have not yet been widely distributed. Materials developed by CARITAS/PRITECH are now available for purchase and were observed in some PVO communities, as well as in CARITAS Mothers' Clubs. In spite of progress made by PRITECH, technical assistance in the design and use of educational materials, there are still specific needs for training at all levels in the application of improved communication techniques.

VI. RECENT SOCIAL COMMUNICATION EXPERIENCES

A. NUTRITION IEC PROGRAMS

Soybean Utilization Project

Between 1977-79, a pioneering effort in social marketing was launched in the Department of Cochabamba, designed by the University of North Carolina, Chapel Hill, supported by U.S.A.I.D. and managed by San Simon University. This experimental program, known as the Bolivian Soybean Utilization Project, was perhaps the first systematic attempt in Bolivia to employ a combination of interpersonal and mass media communication methodologies for dietary behavioral change. The project relied heavily on formative communication research in the design of demonstrations, posters, cookbooks, films, jingles and radio spots in both Quechua and Spanish intended to promote the sale and consumption of soybeans in a department of the country where soybeans were previously available but not widely consumed. Based on a social marketing strategy, preliminary audience research was conducted, messages were targeted, materials were designed and an effective distribution system for an affordably-priced product was developed. Three teams were trained (promotion, marketing and demonstration) in the use of materials and messages. These teams conducted over 1300 village visits during the life of the project.

Generally heralded as an innovative behavioral change project, the results of an evaluation using three large-scale field surveys are complex and open to interpretation. Sixty-one percent of those interviewed said that they had bought soybeans at least one time as a result of the campaign. Seventy-three percent reported they had eaten soybeans in their own home. The project found that radio was a critical factor in getting people to go to demonstrations and as a reminder about where to buy soybeans. Demonstrations of how to prepare soybeans was also a key activity. Unfortunately, according to Dr. Joseph Edozian (former director of the project), despite good working relations with local authorities and the collaborating University, the volatile political situation in Bolivia and high rates of inflation during the last year of the project seriously affected its final outcome. Planned project follow-up work was never conducted.

Buena Madre

A second major experimental nutrition social marketing project, also funded by U.S.A.I.D. was conducted between 1979 and 1982. This project known as Buena Madre was the offshoot of an experimental component of the National Nutrition Improvement Project supported by U.S.A.I.D. in the late 1970s. It was carried out by the Ministry of Planning and Coordination (MPC), which was responsible (at least at the beginning of the project) for coordinating intersectorial activities in nutrition education during the Five Year Food and Nutrition Plan period of 1976-1980 (Plan Quinquenal de Alimentacion y Nutricion). The overall objectives of the pilot project were to improve infant feeding practices and diarrheal disease control, and to combat goiter through the use of mass media (radio) and interpersonal communication. Additional objectives of the project were the development and standardization of appropriate techniques and methodologies for non-formal nutrition education and the institutionalization of this methodology in the government and private sector organizations working in health.

The initial phase of the project was the execution of a study of food habits and cultural patterns related to diarrhea, breastfeeding and weaning in rural areas of Bolivia. The information obtained permitted the identification and clarification of the traditional beliefs considered scientifically erroneous, which the project intended to address. Principal concepts and popular linguistic terms related to the targeted nutritional themes as well as the diagnosis and treatment of specific problems were also identified. This information formed the basis for the design and field testing of radio dramas, jingles and graphic educational materials.

Three principal ecological regions of the country, the Altiplano, the Valles and the Llanos, were chosen for the project, encompassing Aymara, Quechua and Spanish-

speaking communities. The principal audience of the project was approximately six thousand members of mothers' clubs of CARITAS, influencing a total population of approximately 27,500. The educational campaign was launched in each area with the training and supervision of promotors in the use of materials and the handling of specific situations with individual mothers. The timing of radio programs was coodinated to reinforce the interpersonal communication component of the project and the use of flipcharts, manuals, posters and recipe books.

An internal evaluation of the project concluded that the project was successful and represented a strong model for non-formal nutrition education in Bolivia. Unfortunately, the materials developed during the project met with resistance on the part of the MPSSP's National Bureau of Food and Nutrition which was not directly involved in the project. Consequently the educational materials were never utilized on a large- scale, although a few PVOs did use, and in some cases, are still using the flipcharts and training guides. Because of the fluid nature of public institutions, staff turn-over and shifting responsibilities for nutrition, there are few lasting traces of the project in terms of core staff capable of applying the research and message-development methodologies introduced by this project.

National Breastfeeding Campaign

During the early 1980s, UNICEF strongly encouraged and financially supported the Ministry of Health's efforts to promote breastfeeding, especially among urban mothers. A communication campaign was organized, during which the MPPSP fostered the creation of a National Committee for the Promotion of Breastfeeding; the development of a code of ethics for the production and distribution of breastmilk substitutes; and a presidential decree in defense of the rights of pregnant and breastfeeding working-women. Training courses were held for health personnel and changes were made in some hospital practices to encourage breastfeeding. Posters produced by UNICEF were distributed in urban areas throughout the country as well as a series of eight television programs and numerous radio spots. Unfortunately, a formal evaluation of the impact of these efforts was never conducted, and, perhaps because of the economic crisis in Bolivia or perhaps because of changes in institutional priorities, the momentum of the promotional campaign ended in 1985.

UNICEF representatives interviewed during the Needs Assessment stated that there is mounting interest in reconvening the National Committee for Breastfeeding. There is also interest in launching a second major breastfeeding campaign to address the growing concern that this once universal practice is declining dramatically in urban and

peri-urban areas of the country. Past efforts to control the inappropriate promotion and sale of infant formulas have been diluted. Even the Bolivian social security institute now distributes free locally-produced breastmilk substitutes to new mothers covered under the system. This practice, together with inappropriate or wrong information given to women by their physicians, and the current hospital regulations which separate mothers and infants at birth, highlight the need for a concerted effort to support breastfeeding. Health experts in the MSPPS as well as other organizations feel it is important to take action at this time to prevent the further decline in the prevalence and duration of breastfeeding. There is considerable support for launching a major breastfeeding initiative from the MPSSP as well as from influential groups such as the Bolivian Society of Gynecologists and Obstetricians.

National Goiter Campaign

In 1984, a National Program for the Control of Goiter (PRONALCOBO) was launched by MPSSP to address one of the most serious nutrition problems of Bolivia. This ongoing program is an outstanding example of the positive impact of a well-organized and integrated social communication campaign involving coordination and collaboration between the Ministry of Health, UNICEF, PAHO and a variety of community organizations and PVOs.

The most important strategies of PRONALCOBO are the following:

- promotion and commercialization of iodized salt, as well as the increased consumption of this product by the Bolivian population;
- free distribution of iodine tablets to prevent goiter in newborns and diminish the high prevalence among mothers; and
- systematic iodized oil injection campaigns to prevent and treat goiter in selected populations that can't be covered using other strategies.

The major components of the overall communication strategy rely heavily on the mobilization of regional and community level organizations throughout Bolivia. This has been achieved through an integrated program to train community health workers and organize communities through mothers' clubs and neighborhood associations. In addition to the interpersonal communication component, PRONALCOBO has had an effective and innovative mass media program and support print materials such as posters and flyers. Popular theater, puppets, jingles, radio dramas, "wall newspapers," comic books and demonstrations during weekly markets have all been effectively utilized. The

communication program has developed a national symbol for iodized salt and has subsidized the manufacture of iodized salt to assure its affordability and availability throughout the country.

UNICEF intends to provide financial support and continue its coordinating role for this MSPPS effort. PAHO also plans to continue some financial support.

B. OTHER IEC ACTIVITIES

A variety of other successful IEC programs have been conducted in Bolivia since 1980, relying heavily on the application of social communication methodologies. Among the most notable are the National Drug Campaign known as SEAMOS, the Family Planning Project launched by the Center for Family Orientation (COF) and the National Immunization Campaign.

National Drug Campaign

In August, 1986, the Confederation of Private Business in Bolivia (CEPB), with financial support from U.S.A.I.D., invited publicity and production agencies in the country to submit proposals for the design and production of a social communication campaign dealing with the dangers of drug usage.

A private advertising firm, MULTICOM, won the contract, proposing a creative system of anti-drug education and social mobilization (SEAMOS). The project focuses on the development of educational messages to be delivered via radio, television and other channels as well as innovative activities related to social mobilization. The participation of other institutions that directly or indirectly deal with drug prevention was encouraged.

Other agencies that have been involved in the execution of the project during its first year of life include: ABC Communication, an advertising agency that conducted an urban drug-consumption study of 8-25 year-olds; the Interdisciplinary Center of Community Studies (CIEC) and the Multidisciplinary Center of Commmunity Studies (CEMSE) which have both participated in the design of the social mobilization strategies; and a voluntary technical commission formed by CEPB that is overseeing the campaign.

Through audience research, four target groups have been identified: the family, youth, young adults and the rural sector of the population. The principal channels of communication include: television (documentaries, soap operas and spots), radio, newspapers, and a variety of other print and audiovisuals materials. The first phase of the project is concentrating on the urban zones of La Paz, Santa Cruz, Cochabamba and Beni. An example of the impact and receptivity that SEAMOS has experienced with the

general public and mass media is the fact that the first television documentary produced by the project was recently aired at no cost to the project by all television stations throughout the country on the same day. The project is characterized by having:

- created a multidisciplinary team involving psychologists, psychiatrists, sociologists, educators and social communicators;
- conducted a diagnostic study about drugs usage in the country; and
- promoted the campaign with a national sentiment and identity.

Family Planning Campaign

In 1985, the Center for Family Orientation (COF), a private organization interested in population and maternal child health issues, received technical and financial assistance from Johns Hopkins University's Population Communication Services (JHU/PCS) to develop a communication strategy to increase awareness of family planning services offered by the center's ten clinics in La Paz. A local advertising agency, Avila, was contracted to conduct market research and develop communication materials.

Appropriate messages and media were identified based on data obtained through six audience research studies. The strategy segmented the audience into two major groups: women of reproductive age; and professionals and leaders within the community. The most important point that emerged during the course of the project was the need for a multi-media approach. Initially, the project had intended to focus on radio and print material. Formative research, however, indicated that television had clearly displaced radio in La Paz in terms of potential impact. Therefore, a television component was introduced as a complement to radio communication. Formative research also showed that graphic materials would be useful as reminders of the radio and television messages. Thus, a set of four posters was produced. The production of print materials required special creativity on the part of the designers since they were intended for a predominantly low-literacy population. Technical assistance was required during this process and pretesting was essential to ascertain the comprehension, acceptance and relevance of the materials.

One innovative methodology introduced by the project, not previously employed in Bolivia, was the use of audio cassettes on public buses. Four cassettes were produced and distributed, using the same format as a magazine radio program. They included announcements, music, stories and jokes with a maternal and child health theme. The assessment of a pilot project using this approach indicated that this format was quite

popular, but no formal evaluation of its impact was conducted. The interpersonal communication component played an essential role in the campaign with promoters at the clinic-level reinforcing the mass media messages. The principal of audience segmentation was effectively utilized. Seminars were planned and executed for policy-level and health professionals to change attitudes.

National Immunization Campaign

The National Immunization Campaign was launched during the early 1980s by the MSPPS with technical assistance from UNICEF and financial support from PAHO. The campaigns have been held three times each year since then. This ongoing effort relies heavily on the cooperation of the Popular Health Committees (CPS) throughout the country to inform the general public about the importance of vaccinations. The CPSs also actually organize local mass-vaccination days and administer vaccinations in some communities. A number of mass media messages, graphic materials and training manuals have been developed by the MSPPS and UNICEF throughout the course of the campaigns, and these have been shared extensively with PVOs working in health.

A formal evaluation of the program, conducted by the Information and Documentation Center (CEDOIN) in March, 1986, drew many conclusions relevant to future health and nutrition education interventions. For example, it identified the need for a greater degree of confidence in the authorities responsible for health campaigns in general. It also commended efforts made to stimulate contact and cooperation between modern and traditional medicine. Radio and television were found to be more important than graphic materials in giving information, with television carrying the most weight.

C. LESSONS LEARNED

From the vaccination campaign evaluation and general review of other IEC programs, several lessons have been drawn for the design of future nutrition communication activities.

- Formative research is an essential first step for targeting audiences and identifying appropriate messages and media. Segmenting audiences is critical to the development of communication strategies.
- A balanced mix of mass media, low-literary graphic materials and interpersonal communication has been shown in Bolivia to have the greatest potential for changing social behaviors.

- In a country as ethnically and linguistically diverse as Bolivia, testing and revision of messages and educational materials prior to production and distribution can serve to increase the relevance of materials by ensuring audience comprehension and acceptance.

- Community organizations can play a vital role in extending the impact of health and nutrition campaigns if they have adequate training and support materials.

- Because of the complex relationship between modern and traditional health care systems in Bolivia, it appears important to involve traditional healers and midwives in the diffusion of information on nutrition.

VII. RESOURCES FOR NUTRITION IEC PROGRAMS

A. AUDIENCE RESEARCH CAPABILITIES

Basic Research Capabilities

As discussed in an earlier section, epidemiological and socio-ethnographic research is crucial for the design of a successful nutrition education program in Bolivia. A combination of research methods is recommended for an adequate understanding and analysis of the audience and their situation. This process could involve, for example, the following:

- an updated nutritional epidemiology of the types of families and communities at highest nutritional risk, utilizing (and possibly strengthening the SVEN, SISVAN and information systems of CARE, SCF, FHI, MFM/FFH and CARITAS Boliviana);

- ethnographic and community, medical, and sociological field work to understand the community and family context of nutrition-related behaviors;

- collaboration with the national household food consumption survey of INAN/INE to encourage the addition of KAP-related questions;

- in-depth interviews, focus groups and other ethnographic research on consumers (mothers/parents) and service delivery providers (MPSSP and PVOs), related to dietary habits and communication patterns; and

- the establisment of a comprehensive and useful program monitoring and evaluation systems in the selected field sites.

Existing Research Infrastructure

During the course of the Needs Assessment, a number of consulting groups, commercial advertising agencies and other research organizations involved in

epidemiological, nutrition, and related social science research were identified. As anticipated, there is no single research entity in Bolivia currently capable of conducting all the different types of research discussed above. Several groups that could be involved in different research aspects needed to develop nutrition communication projects in Bolivia include the National Food and Nutrition Institute (INAN), the Center for Food Investigation and Technology (CITA), the Nutrition School of San Andres University (UMSA), and the Interdisciplinary Center for Community Studies (CIEC).

A number of commercial firms in La Paz have solid experience in the area of market research, advertising and have carried out social marketing efforts for breastfeeding, goiter and drug control. SOMARC recently conducted an assessment of advertising/market research groups and found many with good research and creative departments. Several of these were reviewed during the Assessment.

Areas in Need of Technical Assistance

Although there are several research groups with solid experience, the Assessment team felt that some technical assistance will be needed to conduct formative research for the design of nutrition education/communication activities. Some of the research groups identified are relatively new and without much rural field experience. Others have little experience in combining social science, communication and nutritional studies and thus will require technical support.

Members of the U.S.A.I.D.-supported PVO network (PVO-REC) have identified several specific nutrition IEC research areas where technical assistance will be needed, including:

- epidemiological studies;
- focus group and ethnographic research for message design and audience targeting;
- demographic and statistical analysis of nutrition indicators from monitoring systems; and
- systems analysis, observation and interview techniques for operations research.

The PVO-REC has acquired a long-term child survival technical advisor and can utilize the funds from the OPG to obtain local and international technical assistance to strengthen research capabilities.

B. EXISTING COMMUNICATION CHANNELS

Because of the geographic and cultural diversity of Bolivia, the design of a successful communication endeavor will require a thorough investigation of all potential channels of communication and the identification of those most appropriate to a specific message and audience.

Radio

Bolivia has hundreds of radio stations ranging in reach from national to neighborhood. Many are solely commercially oriented, others are educational in nature (radio schools), and still others (especially those broadcasting in Quechua or Aymara) operate a personnel message service for many of the geographically and linguisitically isolated communities around the country. While radio has the greatest outreach in Bolivia at this time, the current economic crisis prevents a large number of Bolivians who own radios from operating them. Batteries are expensive and many rural areas have not been electrified. The use of radio as a component of a nutrition communication campaign should be seriously considered, given its potential reach, documented impact in other health campaigns and also given the fact that such a large percentage of Bolivians cannot read.

Television

Television is growing in both popularity and regular viewership, especially in the urban and peri-urban areas of the country. There are television stations, either state owned, university or private in every major city, some with production facilities. Programming ranges from national and local news to television dramas, documentaries, game shows, continuing education and literacy programs. Television has been utilized creatively by the MPSSP/UNICEF breastfeeding and oral rehydration campaigns and also by the SEAMOS anti-drug campaign for both public service spots and documentaries.

Print

Print materials are currently the most widely used in nutrition education programs, given their relatively inexpensive cost and current program emphasis on interpersonal communication techniques. As described below, flipcharts, posters, recipe books and laminas are the most dominant media available. Health clinics, Mothers' Clubs, and other community groups provide accessible and appropriate channels for the distribution and discussion of these materials. Little impact data is available on specific materials and consequently it is difficult to assess their effectiveness. It is obvious,

however, that because of the complex linquistic nature of the country which is further complicated by low rates of literacy, the careful design and testing of printed materials is critical to their success.

Alternative channels

A number of non-conventional channels of communication have also been identified and successfully utilized in Bolivia in recent communication campaigns. Among the most highly visible are weekly village markets (ferias) during which social dramas, puppet shows and demonstrations have been used to reinforce mass media messages and print materials. "Wall, newspapers" are another media/channel that have become popular in announcing special community events such as mass immunization campaigns. Traditional healers and midwives represent a significant alternative channel for nutrition and health communication which has successfully been utilized by recent IEC efforts in the country. As discussed earlier, given the complex relationship between modern and traditional healthcare systems, it appears important to involve these channels, especially in rural, isolated communities.

C. EXISTING MATERIALS AND PRODUCTION CAPABILITIES

During the Needs Assessment, the team identified and reviewed existing educational materials and assessed local production capabilities and costs. During field visits and meetings with MPSSP, UNICEF, consulting groups, and PVOs, a number of creative health and nutrition educational materials were seen. The Interdisciplinary Center for Community Studies (CIEC) for example, has developed the "wall newspaper" to convey messages. PCI and CARE have used comic books with folk concepts about medicine to present health information. The Center for Food Investigation and Technology (CITA) has developed an experimental, illustrative calendar with space to keep a family record (in drawings) of episodes of diarrhea, immunizations and other key health facts. UNICEF, which has participated in the development of many MPSSP health and nutrition campaigns, has produced posters, manuals and high-quality audio-visual materials working with both commercial production facilities and the Department of Social Communication in the MPSSP. INAN has recently developed a set of three slideshows, several flipcharts, and handouts focusing on the role of nutrition in maintaining health. CARITAS-Boliviana has produced a variety of nutrition education materials over the last two years with technical assistance from PRITECH, including flipcharts, training manuals, educational games, radio campaigns using spots and jingles,

as well as a large growthcard for GM/P demonstrations. Some of these materials are now being sold by CARITAS and utilized by other groups.

PRITECH has also assumed responsibility for the production and distribution of the six nutrition laminas or instructional posters on infant feeding which were developed during the U.S.A.I.D.-sponsored workshop in Oruro last year, managed by Manoff International. Twenty-eight people from the MPSSP (both central and regional level) and PVOs working in that region were trained in formative research, and materials design and pretesting. An interagency committee was formed following the workshop to review and adjust the educational messages for a broader audience.

Although it has taken a year to obtain approvals to print and distribute, they are now ready for use. Several of the PVOs voiced concern that the materials are too large and flimsy to withstand field conditions, as they are not laminated as originally intended, because of cost. INAN, as discussed earlier, is in the process of developing an impact study of these materials, which if conducted will provide valuable information for future nutrition education material development.

The Assessment team also visited a number of production facilities to ascertain their level of capability. It is clear that there are a variety of resources for the production of print materials, radio spots and dramas and television spots and documentaries. Given these resources, it is recommended that the MPSSP or PVO-REC develop a roster of local artists and production agencies for use in developing media products and materials.

VIII. DONOR PLANS FOR SUPPORTING NUTRITION IEC EFFORTS

A. U.S.A.I.D.

The four principal sources of U.S.A.I.D. support for nutrition IEC activities in the next few years will be: the Child Survival Bilateral project presently being developed with the MPSSP; the MCH Title II Food Aid Program; the PVO-REC Operations Program Grant for technical support to Child Survival Projects; and centrally (i.e., Washington) funded projects such as the AED Nutrition Education/Social Marketing Project. U.S.A.I.D. intends to support the development of sustainable Child Survival services with emphasis on decentralization, donor collaboration and increased coverage and availability of Child Survival services through PVOs. The five Child Survival priority areas include the Expanded Program of Immunization, Oral Rehydration Therapy, Acute Respiratory

Infections, Water and Sanitation and Nutrition. The U.S.A.I.D. nutrition strategy, now being finalized, will stress the integration of nutrition with the other four components. Among the key elements of the strategy will be a nutrition package consisting of growth monitoring/promotion, breastfeeding protection, improved infant feeding practices, dietary management of diarrhea, and targeted supplemental feeding. The PL-480 MCH Program will be coordinated with the Child Survival projects, in an effort to strengthen the role of the Mothers' Clubs which have played a key role in the distribution of donated commodities.

B. PAN AMERICAN HEALTH ORGANIZATION (PAHO)

According the new Country Representative, the Pan American Health Organization is planning to emphasize food security in Bolivia during their next funding cycle. It is also planning to restructure the 18 PAHO projects currently in operation. PAHO will continue to provide technical support to the Government's nutrition program in anemia, Vitamin A and nutritional surveillance (SVEN), with a strong financial commitment to the National Goiter Control Program (PRONALCOBO). The activity of most relevance to future nutrition education efforts is PAHO's proposed support for the development of nutrition education modules integrated with primary health care by geographic regions. This strategy emphasizes community participation, the use of mass media for community education, and simplified norms and appropriate technologies for formal education. PAHO is also planning to evaluate the progress of the SVEN, strengthen its implementation and support its planning process. Also under consideration is the possibility of providing program support for developing the institutional capacity of the Department of Social Communication in the MPSSP. This might involve both a financial investment in equipment and technical support related to the production of materials. PAHO continues to provide technical assistance for the administrative restructuring of the Ministry under the new decentralization law.

C. UNICEF

Over the last decade, UNICEF has taken a lead role in supporting the Ministry of Health's nutrition programs and plans to continue providing technical assistance in the development of communication strategies and educational materials. UNICEF's Child Survival priorities in Bolivia are ORT, ARI, EPI and child growth which encompasses breastfeeding, weaning, as well as the prevention of goiter. The themes of the major communication campaigns that UNICEF has assisted the MPSSP to launch are the

promotion of breastfeeding; the prevention and treatment of diarrhea and acute respiratory diseases; the national goiter program; and the national immunization program. Of these, the goiter, diarrhea, acute respiratory and immunization campaigns are on-going and UNICEF representatives interviewed during the Needs Assessment, stated that there is interest in reactivating the breastfeeding campaign. A new theme which UNICEF is currently exploring, is the "family food basket," which would involve the promotion of low-cost, nutritious, locally-produced foods, with emphasis on the consumption patterns of pregnant and breastfeeding women and children under five years of age.

Communication campaigns supported by UNICEF in Bolivia have typically involved the production of a variety of complementary materials including manuals, "magazines," comic books, flyers, posters, radio dramas and spots, films, videos and slide shows. The larger campaigns have effectively utilized mass media as well as traditional channels of communication such as weekly markets. Emphasis has also been placed on the mobilization of popular health committees and other community organizations to distribute educational materials.

UNICEF has expressed interest in participating with other donor agencies, the Ministry of Health and the PVO networks in an interagency nutrition-education advisory group. The advisory group which held its first meeting during the Assessment visit, proposes coordinating resources, technical assistance and the sharing of materials developed by the various institutions involved in nutrition throughout the country.

D. THE WORLD BANK

The World Bank is in the process of developing a Population, Health and Nutrition Sector Project in Bolivia to assist the government to provide basic integrated health and nutrition services. Major emphasis will be placed on supporting the decentralization of the MPSSP with the goal of augmenting the coverage of mothers and children in urban and peri-urban areas. The Bank also seeks to alleviate the most extreme effects of malnutrition by strengthening the ability of the MPSSP to carry out national health and nutrition campaigns; improving inter-agency coordination in health and nutrition; and assisting private and non-governmental organizations, particularly in the rural areas of the country where the MPSSP is weakest. Social communication will be emphasized as an important way to bring about changes in health and nutrition behavior. Consequently, ways to strengthen technical capabilities in this arena are being examined.

The Bank will field a ten-person project design team in May, including an IEC

consultant. One of the key tasks of that expert will be to look at the existing mechanisms for carrying out communication activities in the rural areas. The community participation component of the Bank project is expected to be a large one, especially in nutrition. The Bank is also supportive of any plans to create a formal coordinating/advisory group for nutrition.

IX. RECOMMENDATIONS AND PROPOSED PROJECT

The following recommendations and proposed nutrition communication project are based on the findings of the Needs Assessment.

A. GENERAL CONCLUSION AND RECOMMENDATIONS

Nutrition Programs and Research

1. The Assessment has documented a wide range of needs in both the governmental and private sector organizations working in nutrition. In order to effectively channel resources to improve nutrition programs and nutrition communication activities, strong donor cooperation will be needed. It is therefore recommended that U.S.A.I.D. take the lead role in organizing an Inter-agency Coordinating Committee for Nutrition Programs. This idea, which was explored in a meeting attended by representatives form U.S.A.I.D., PAHO and UNICEF was well received and plans are to include the World Bank, the Inter-American Development Bank, as well as the MPSSP and representatives of the FENASONGS and PVO-REC. It is further recommended that nutrition education, a major component of nutrition activities in the country, be given special attention by this Committee.

2. In addition to this Inter-agency Coordinating Committee, it is also recommended that a Nutrition Communication Technical Advisory Group composed of agencies working in nutrition be created in order to establish priority topics for communication programs and message guidelines coordinated with other Child Survival messages. Such a group should also facilitate the sharing of educational materials and training manuals and assure the integration and unification of messages reaching to target audiences.

3. Differences still exist in criteria used by SVEN and the PVOs to classify malnourished children. This has led to confusion in the way data are interpreted and has

contributed to differences in the educational messages developed by different groups. The nutrition status data tabulated under the SVEN, and growth data tabulated by PVOs still need modification, although the National Growth Monitoring Workshop (January, 1988, U.S.A.I.D./UNICEF) did help unify criteria. Since growth data are potentially useful for targeting audiences and selecting appropriate messages, it is recommended that the MPSSP and PVO community nutrition surveillance activities be further coordinated and strengthened through additional training and supervision in order to improve both the quality and coverage of these programs.

4. The Assessment team also recognized the potential use of growth data for both planning and managing programs and sensitizing and mobilizing parents and/or communities to ameliorate nutritional problems. It is therefore recommended that PVOs be given assistance in the tabulation and analysis of their data and in feedback techniques for program personnel, parents and communities.

5. Existing nutritional studies, the SVEN, Height Census and PVO growth monitoring data were reviewed by the Assessment team to identify population groups with the highest levels of malnutrition. Soci-cultural-economic data as well as development indices and ecological characteristics were also reviewed to identify factors statistically correlated with these high levels of malnutrition. Based on this review, it is recommended that the provinces of Western La Paz, Northern Potosi, Southern cochabama and Northern Chuquisaca be targeted for future nutrition communication interventions.

6. Energy-protein malnutrition was identified by the Assessment team as being the most serious nutritional problem in the country. PVO growth data further indicates that significant growth retardation begins during the second half of the first year of life. Given the fact that this problem is not currently being addressed, it is recommended that the proposed U.S.A.I.D. nutrition communication project focus on energy-protein malnutrition. Infant feeding practices including breastfeeding, weaning and dietary management of diarrhea and other infectious diseases under two years of age should be further investigated in order to identify appropriate programs and educational messages to improve the nutritional status of this vulnerable age group.

7. The data reviewed also indicate that the second most serious health/nutrition problem in Bolivia is endemic goiter. Although this problem is well-researched and is currently being addressed by a UNICEF-supported national goiter campaign (PRONALCOBOC), it is recommended that this program receive additional communication support in transforming a curatively oriented oil-based periodic injection

program into a preventive iodine-fortified salt consumption program. UNICEF, which has taken the lead in eradicating goiter, has expressed interest in receiving technical support from U.S.A.I.D., in the second phase of the national campaign.

8. It is also recommended that U.S.A.I.D. support program-oriented, socio-anthropological research on the causes of malnutrition in Bolivia. This information would serve as a basis for understanding illness and food-related habits and practices that might be modified through future nutrition and health programs and communication interventions.

9. During the Needs Assessment, a number of national public and private institutions were identified that could participate in nutrition research in Bolivia including the National Food and Nutrition Institute (INAN) of the MPC; the National Bureau of Food and Nutrition (DNNA) and the Bureau of Maternal and Child Health (DMI) which may soon be combined under the Bureau of Family Health of the MPSSP; the Nutrition School of the National University (UMSA); the Center for Food Investigation and Technology (CITA); and the Interdisciplinary Center for Community Studies (CITA). It is recommended that a national group or groups be used in conducting supportive research for the proposed nutrition communication project. Technical Assistance would, in some instances, be required to strengthen current capabilities.

IEC Activities

1. Given U.S.A.I.D.'s present plans to strengthen the MPSSP's capacity to carry out social communication within Child Survival programs, and the uncertain conditions surrounding the recent law to decentralize MPSSP activities, it is recommended that the proposed AED Nutrition Communication Project work primarily with the private sector, but involve representatives of the MPSSP when appropriate.

2. Because the PVOs in Bolivia, both national and U.S.-based, play an important role in the delivery of primary health care services, especially in rural areas where nutritional problems are most serious, and because many have demonstrated their interest in developing their educational programs, it is recommended that the proposed AED project provide interested PVOs technical support through its resident advisors, or, if the volume of demand warrants it, help identify national/international sources of technical assistance.

3. Based on the identification of the high priority regions of the country, it is recommended that U.S.A.I.D. consider supporting an education/communication project in up to two of the regions and in the rapidly growing peri-urban areas of La Paz. Such a

project would conceivably be managed by a communication planner, executed by a PVO with a strong presence in the area and involve other PVOs and/or the MPSSP operating in the region as well.

4. Two newly-formed PVO associations were identified by the Assessment team (the FENASONGS and PVO network currently referred to as the PVO-REC) through which a nutrition communication project could be managed. Although both could potentially provide a stable structure for the development of a sustainable project, it is recommended that the proposed AED project focus on the PVO-REC which is funded by a grant from U.S.A.I.D. specifically designed to channel technical assistance and encourage the sharing of resources and materials. Efforts should be made, however, to involve members of the FENASONGS whenever appropriate.

5. It is further recommended that the proposed AED project involve both a communication planner and a communication trainer in the design and execution of a comprehensive nutrition education/communication program. Ideally, one or both of these experts would also have training or experience in nutrition.

6. The need for a variety of nutrition education materials, manuals and audiovisual materials are also identified by the PVOs during the Assessment. Since most of the PVOs have neither sufficient technical capacity nor resources to design and produce materials, it is recommended that they be developed jointly and shared. Special care will have to be taken in designing materials to assure that they meet the needs of a wide range of PVOs, and that they also meet the standards established by the proposed Nutrition Communication Technical Advisory Group, in order to assure their accepted use nation-wide.

7. Since there are a number of market research, education and social science experts in the country who have the skills to conduct formative research for a communication program and to produce radio, television and print materials, it is recommended that future U.S.A.I.D./UNICEF communication efforts draw on these local resources whenever possible. Under the direction of a skilled communication manager, and with occasional technical support these specialists can fulfill their required role.

8. Given the current emphasis on decentralization and regionalization of health care services in Bolivia, it is recommended that future communication programs investigate the potential role and involve, to whatever extent possible, community organizations such as the popular health committees, mothers' clubs and neighborhood associations. It is also recommended that because of the complex relationship between

modern and traditional health care systems in Bolivia, traditional healers and midwives should be actively involved in the diffusion of information on nutrition.

9. Because past IEC experiences in Bolivia indicate that a balanced mix of mass media, low-literacy graphic materials and interpersonal communication has the greatest potential for changing social behaviours, it is recommended that future nutrition communication attempt to achieve such a balance.

B. RECOMMENDATIONS FOR PROJECT PROPOSAL TEAM

The Assessment team also identified specific recommendations for the Child Survival Project Proposal (PP) team. They include:

1. Given the fact that the review and analysis of existing nutrition-related data carried out during the Needs Assessment underscores the severity and widespread prevalence of nutritional underscores the severity and widespread prevelance of nutritional problems in Bolivia, it is recommended that the PP design team focus on nutrition as a key project component.

2. Since there are potentially significant ways that the proposed AED nutrition communication project's formative research, media and educational products can tie into the Bilateral Child Survival Project, it is recommended that the PP team communication expert examine the possibility of linking the proposed training activities, market research, and development of nutrition communication strategies with the Bilateral Project.

3. It is also recommended that the PP team consider whether the research demands to develop communication messages for five priority health areas (water and sanitation, ORT, EPI, ARI and nutrition) warrant creation of a special permanent research group or whether the formative research needs can be provided more satisfactorily and cost-effectively by part-time consultants.

C. DESCRIPTION OF THE PROPOSED NUTRITION COMMUNICATION PROJECT

During the AED Needs Assessment, areas of the country and population groups were targeted for future nutrition communication interventions, based on the team's analysis of the prevalence and severity of nutritional problems and institutional framework for conducting such a project. The broad outlines of a nutrition communication project were developed by the Assessment team before leaving the country. The executing agency for the project would be the Academy for Educational

Development (AED) which would provide two long-term communication advisors based in La Paz. The proposed project emphasizes the involvement of the private sector. This decision was based on the understanding that the U.S.A.I.D.-Bolivia Child Survival Project (now in the project proposal stage) will be designed to strengthen the MPSSP's capacity to plan and execute social communication for nutrition as well as other priority programs. The team, therefore, recommended that the AED project focus on the U.S.A.I.D.-supported PVO network (PVO-REC) because of its structure and demonstrated interest in nutrition education/communication. The project has two distinct components, a field-level communication project and a comprehensive training program. The following is a brief description of proposed activities.

One PVO with a Child Survival program would be selected (according to specific criteria) as a counterpart to the AED advisors to execute the field component. Based on the analysis of current research findings, the target population of the field project would be children 6-23 months of age living in the peri-urban areas of La Paz (El Alto) and up to two other high-priority regions of the country. It is anticipated that priority messages would address energy-protein malnutrition and include the promotion of breastfeeding, appropriate infant weaning practices and the dietary management of diarrhea and other episodes of infection. The identification of specific educational messages, and the selection of appropriate educational materials and communication channels would be based on research undertaken during the initial stages of the project.

The second component of the proposed project is technical assistance and training in communication for the U.S.-based and national PVO community as well as the MPSSP. Training activities would be carried out directly by the AED advisors with support from local consultants and staff from participating PVOs.

Based on field observations and the findings of the PVO survey conducted during the Needs Assessment, the project proposes to address the following technical assistance/training needs:

- design and execution of formative research for the development of educational materials and messages;
- development of communication strategies that successfully integrate interpersonal communication methods and mass media;
- development and use of "non-conventional" education materials (puppets, social dramas, videos and storytelling rather than posters, slides and flyers);

- development of educational materials/messages for rural audiences (indigenous languages and low literacy);
- collection and analysis of data related to both growth monitoring/promotion and ethnographic research;
- development of information systems;
- establishment of norms and procedures related to nutrition and nutrition education; and
- evaluation of educational programs.

In addition, the project proposes to support a comprehensive training program to train communication planners in both the MPSSP and the PVOs active in Child Survival and nutrition. The development of the capability to plan and manage social communication programs is important to changing food habits and practices for improving nutritional status. Although there are some trained individuals in the country, neither the MPSSP nor the PVOs contacted have the institutional capacity to design and execute integrated communication programs based on market research and using mixed media and community level education. Training of the following four levels of personnel are proposed to enable organizations to implement effective nutrition education/communication activities:

- management/headquarter PVO/MPSSP staff responsible for the design and execution of Child Survival communication programs and materials;
- trainers and supervisory personnel responsible for the implementation of nutrition education interventions on a regional level, and for training and supervising mid-level and community level health workers and teachers in appropriate educational techniques;
- auxiliary nurses and nutritionists responsible for educational activities on the local/health post level;
- community health workers, teachers and RPSs, etc., responsible for nutrition education in their communities and for fostering changes in dietary habits and practices.

The recommendations outlined above, as well as a preliminary draft proposal were discussed with the Mission at the end of the Needs Assessment. Based on the recommendations of the PP team, a final project document and budget will be submitted to the Mission for consideration.

APPENDIX A

A REVIEW OF THE NUTRITIONAL SITUATION IN BOLIVIA

Dr. Fernando Rocabado Q.

APPENDIX B

ANALYSIS OF PVO NUTRITION EDUCATION NEEDS

Lic. Martha Clavïjo T.

INFORME SOBRE LA PARTICIPACIÓN DE LA LIC. MARTHA CLAVIJO T. EN EL ASSESSMENT REALIZADO POR LA ACADEMIA PARA EL DESARROLLO EDUCATIVO

LA PAZ BOLIVIA, MARZO 7-25/1988

Las Instituciones entrevistadas fueron:

- CARE
- CONCERN International
- SAVE THE CHILDREN
- Corporación de Salud Rural Andina
- Plan de Padrinos Tambillo
- Food For The Hungry International
- Freedom From Hunger Foundation (MFM)
- Caritas Boliviana
- PRITECH
- ASONGS LA PAZ
- FENASONGS

Las Instituciones mencionadas en los tres últimos lugares, no implementan programas, sin embargo fueron incluidas en razón de que en el caso de PRITECH, presta asistencia técnica y apoyo a Caritas y a otras instituciones en Supervivencia del Niño y en el caso de ASONGS La Paz y FENASONGS, engloban a todas las organizaciones no gubernamentales que trabajan en salud tanto a nivel del Departamento de La Paz como a nivel nacional respectivamente.

Lamentablemente, la encuesta no pudo der aplicada a nivel nacional debido al poco tiempo disponible.

III. TIEMPO DE TRABAJO.

El tiempo de inicio de actividades por instituciones de más de 30 años, como el caso de Cáritas a medio año como en el caso de FENASONGS. Sin embargo el programa de Supervivencia Infantil tiene solamente dos años de antiguedad en algunas instituciones y en otras éste es su primer año de implementación.

IV. Areas de trabajo

De todas las instituciones encuestadas, 7 trabajan en el Departamento de La Paz; 3 en Oruro; 3 en Cochabamba; 4 en Potosí; 3 en Chuquisaca; 1 en Tarija; 1 en Santa Cruz; y 1 en el Beni. En el Departamento de Pando no existe ninguna institución que trabaje en programas de supervivencia infantil.

La Paz	Oruro	Cochabamba	Potosí	Chuquisaca	Tarija
Concern	Concern	Concern	Concern	Care	Care
Caritas	Caritas	Caritas	Caritas	Caritas	
SAVE	F.H.I.	P.S.R.A.	Care	Plan	
P.S.R.A.			F.H.I.		
Plan					
F.H.I.					
M.F.M.					

Santa Cruz	Beni	Pando
P.S.R.A.	SAVE	---

V. Cobertura Poblacional

No todas las Instituciones encuestadas proporcionaron información sobre su cobertura, por consiguiente no podemos tener ni siquiera una aproximación, contando solamente con el número de comunidades que ascienden a 907 entre grandes, medianas y pequeñas sin contar las atendidas por Caritas.

VI. Personal

Como se puede observar en el cuadro relativo a personal de capacitación para atención primaria de salud; supervivencia infantil; nutrición; desarrollo comunitario; y otros, sólo el Programa del Proyecto CONCERN cuenta con personal a nivel central y comunitario para cada uno de éstos programas. Por la característica de

trabajo de Concern, la mayoría de éste personal pertenece a las Unidades Sanitarias donde se ejecuta el programa.

Las demás instituciones cubren los diferentes programas además de realizar otras funciones que varían desde administrativas hasta de supervisión.

Otra característica sobresaliente es el hecho de que las Instituciones grandes o pequeñas no cuentan con personal específico y capacitado en educación nutricional y comunicación social que esté dedicado exclusivamente a estas actividades.

la relación entre el personal profesional, los promotores y la población atendida no es proporcional, es decir que los capacitadores son insuficientes para formar personal medio y de base.

VII. Calificación del personal

El personal que realiza actividades de educación nutricional y comunicación social tiene diferentes calificaciones profesionales, desde médicos, nutricionistas, enfermeras con grado universitario, profesores y técnicos a nivel medio, hasta personal sin ninguna formación quienes desarrollan actividades polivalentes.

VIII. Personal de Comunicación

De todas las instituciones que implementan programas de supervivencia infantil solamente tres cuentan con una sola persona formada en comunicación social pero no desempeñan funciones exclusivas en ésta área.

Es necesario destacar que PRITECH como institución asesora cuenta con dos comunicadores que están desarrollando material audiovisual en comunicación social.

IX. Programas desarrollados

Todas las instituciones realizan actividades de supervivencia infantil con diferentes componentes . Entre los que más se destacan están: Vigilancia de crecimiento; Inmunizaciones y Tera - pia de Rehidratación Oral que son comunes a casi todas las organizaciones.

Los programas de educación alimentaria nutricional se incluyen en diferente intensidad y con diferentes criterios que varían desde una simple charla hasta demostraciones y visitas domici - liarias.

X. Medios Audiovisuales

Conforme muestra el cuadro consolidado, los laminarios y los slides son los medios visuales más utilizados por las instituciones. El material del Ministerio de Previsión Social y Salud Pública es usado preferentemente por la mayoría de las instituciones de manera parcial. En segundo lugar el de Caritas y el material educativo que elabora cada una de las diferentes instituciones.

En conclusión: El material elaborado por el MPSSP. cubre muy pocas actividades y sus recomendaciones y normas son incorporadas en forma parcial por las instituciones, las mismas que desarro - llan laminarios, afiches y cartillas con criterios propios o reproducciones de material usado en otros paises.

XI. Necesidades de Educación Nutricional y Comunicación

a) Personal

Sólo una institución (CONCERN) ha expresado la necesidad de contar con mayor personal (4 nutricionistas).

b) Asistencia Técnica

Se han mencionado seis rubros de asistencia técnica:

- Estrategias de educación para el área rural
- Evaluación de programas educativos
- Sistemas de información
- Recolección y análisis de datos
- Estadisticas educativas
- Metodologías y técnicas de comunicación.

Las respuestas de las instituciones son muy dispersas, destacándose en primer lugar la evaluacion de programas educativos; en segundo lugar la metodología y técnicas de comunicación y en tercer lugar están: recolección y análisis de datos y estadisticas educativas.

Es de hacer notar que existe un Centro de Documentación y Biblioteca especializada en PRITECH que se ha puesto a disposición de todas las instituciones pero lamentablemente es poco utilizada por las mismas.

c) Capacitación a personal

Las respuestas en este campo tampoco son uniformes, van desde las necesidades de capacitar a personal profesional, personal de campo como promotores y responsables populares de salud en los aspectos de educación comunitaria y vigilancia de crecimiento.

De las respuestas se deduce la necesidad de capacitar y actualizar al personal profesional que en su mayoría está en

la ciudad y es responsable de capacitar a los niveles medios e inferior.

d) Material educativo

Con relación a las necesidades de material educativo se nota una preferencia para recibir asistencia técnica en el conocimiento y desarrollo de técnicas básicas para su elaboración inclusive a nivel de comunidad.

La otra área de importancia es la de utilizar los medios masivos de comunicación social y que requieren un asesoramiento y asistencia técnica a corto plazo.

e) Otros

Existen tres líneas de interés:

- Asistencia técnica en el análisis del impacto de los programas.
- Las técnicas en el uso de medios audiovisuales no tradicionales como: títeres, sociodramas, videos, etc. hechos por la misma comunidad.
- Apoyo económico para la compra de equipos audiovisuales

Es de destacar el interés que tiene ASONGS La Paz en recibir un apoyo para realizar un seminario taller sobre Supervivencia Infantil dirigido a sus afiliadas que trabajan con este programa, para compartir experiencias, para intercambiar material educa - tivo y para unificar criterios.

XII. CONCLUSIONES

Las instituciones no gubernamentales que trabajan en salud tienen las siguientes caracterîsticas:

- La mayorîa no toma en cuenta los valores culturales de las áreas donde se trabajan.
- Tienen una visión y estrategia de proporcionar servicios y extenderlos sin lîmite alguno.
- Existe desconfianza hacia las organizaciones locales (sindicatos, federaciones) y sus programas no tienen una lînea de que sean incorporados a la estructura local.
- En cuanto a la extensión de servicios se utiliza la formación de promotores (la mayorái pagados) que ejecutan las actividades programadas.
- El enfoque de los programas y su contenido no están inspirados en valores culturales bolivianos, sino en experiencias de otros paises.
- La formación de personal profesional está más inspirada (casi totalmente) en experiencias y contenidos de organizaciones internacionales o extranjeras.
- Los contenidos educativos por consiguiente tienen diferente inspiración, también por una falta de coordinación y de una acción unificadora de parte del Ministerio de Previsión Social y Salud Pública: Contenidos diferentes, diferente intensidad en la capacitación de promotores, diferentes niveles de formación.
- El material elaborado por cada una de las instituciones no es compartido con las demás.
- En algunos casos el material educativo es vendido a costos sumamente altos que impiden su adquisición en los ejemplares necesarios y por otra parte la institución que vende éste material no proporciona la capacitación necesaria en cuanto al manejo del mismo.

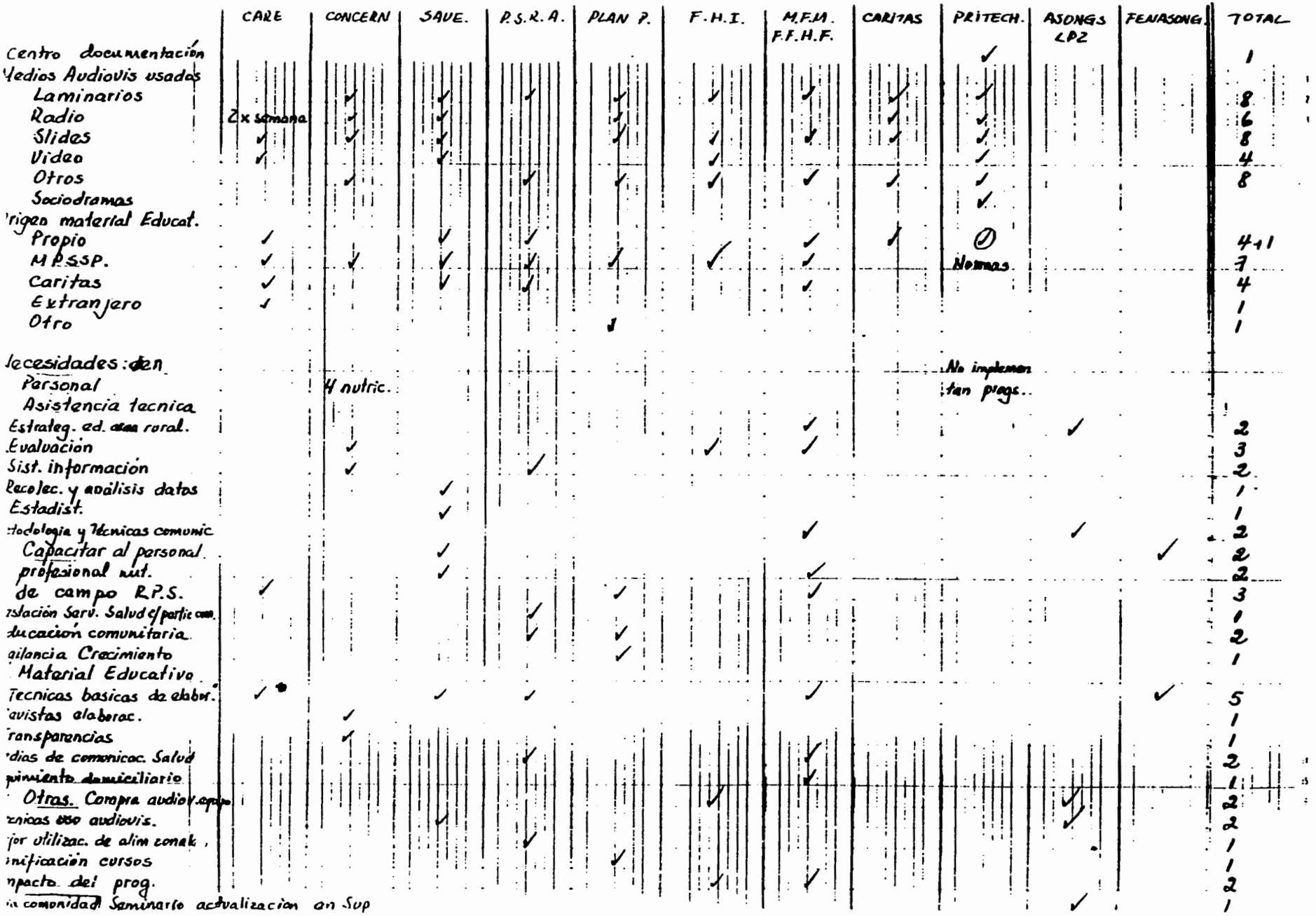
- El material educativo existente , en la mayoria de las instituciones, está más dirigido a las áreas urbano marginales que a las rurales , con excepción el de Cáritas que está orientado al área rural.
- Al ser muy dispersos los programas de educación nutricional y de comunicación masiva y al no contar con personal sufi - ciente y especializado, las actividades de supervisión y de seguimiento educativo no se cumplen.

ENCUESTA SOBRE NECESIDADES DE EDUCACION Y COMUNICACION EN NUTRICION

1. Nombre de la Institución.....
   Tiempo de trabajo .....Tienen Prog. de Supervivencia Inf. SI NO
2. Area de trabajo: Departamento Provincia Cantón Comunidades
   .....
   .....
   .....
3. Cobertura: Poblac. total.....Nº madres.....Nº niños -5 años.....

4. Personal de capacitación en: Nivel central Nº Nivel Comunidades Nº
   - Salud .....
   - Superv. Infantil .....
   - Nutrición .....
   - Desarrollo .....
   - Otros .....
5. Calificación del personal Salud Nutrición Desarrollo Comunicación
   - Profesional .....
   - Técnicos medios .....
   - Profesores .....
   - Promotores .....
6. Con qué personal profesional o técnico cuentan para comunicación.....
   .....
   .....
7. Qué programas de comunicación y educación nutricional desarrollan y por qué medios
   Radio Laminarios Slides Video Otros
   a).....
   b).....
   c).....
   d).....
8. Qué necesidades tienen en complementar ó iniciar prog. de educación y comunicación.
   a) Describir programas .....
   .....
   .....
   b) Necesidades de personal .....
   .....
   c) Necesidades de asistencia técnica en:.....
   ....
   d) Necesidades de capacitar al personal actual.. .....
   ....
   e) Necesidades de material ed... .....

INSTITUCION	CARE	CONCERN.	SAVE	P.S.P.A.	PLAN. P. Tambillo	F.H.I.	(MFM) F.F.H.F.	CARITAS	PRITECH	ASONGS LP	FENASONG	TOTAL
Tiempo de trab.	2 años	11 años	3 años	5 años		4 años	2½ años		2½ años	5 años	½ año	
Tienen Prog de Sup. Inf.	Si	Si	Si	Si	Si	Si	Si	Si	Apoyan.		Apoyan en Zona Rep.	8 si 3 no
Area de trabajo												
LPZ Nº Comunid.		31 com.	55 com.	34 com.	165 com.	✓	34 com.	17 prov.	Apoyan a	✓		7
ORU "		183 com.				✓ 156		✓	Caritas			3
COBA "		25 com.		1 com.				✓	y a			3
PTS "	38 comunid.	79 comun.				✓		✓	otras			4
CHUQ "	50 comunid.							✓	ONGs.			3
TRJ "	27 comunid.											1
STC "				12 com.								1
BENI "			73 com.									1
Pando "												0
Cobertura: poblac. madres	20.000 Tot. 5.600	-	15.000 Tot.	15000 Tot.	20.000 m.	20.000 Total	650 m		—	No implem.		
niños menores 5a.	6.100	-	2 000		15 000 n.		860 n.		—			
Nº Personal de capacit. para:	Cant. Comu.	Cant. Com	Cant. Com	Cant. Com	Cant. Com	Cant. Com	Cant. Com.	Cant. Com.	Cant. Com.	Cant. Com.	Cant. Com.	
At. prim. salud		7 14	3	1 4						No implem.		
Superv. infantil		9 13			6			2	2	Proceso Est.		
Nutrición		5 11								"		
Desarr. Comunit.		1 1										
Otros		1 1							2			
Todos los ant.	4 18					4 3						
Calificación del person.												
Profesional en salud	10(S)	7S; 5N; 1D; 1C.	3N			3(S)	1(S) 2(NS)	7	1(ND)	✓		
Tecnicos	12(S)	9S; 3N; 1D; 1C			4(S)		4(S)	6	3			
Profesores		4S; 4N; 1D; 1C	3	1(S)			3(S)		2			
Promotoras		208S; 208N.			59	21	68(S)		Caritas			
Otros								22				
Personal de comunicac.	Ninguno	(Una)	Ninguno	Ninguno	(1)	Ninguno	Ninguno	(1)	(Dos)			5 No 4 si
Programas desarrollados												
Atencion Prim. Salud		✓		✓								2
Superv. Infantil		✓		✓			✓	✓		✓		6
Vigilancia del crecim.	✓					✓	✓	✓	✓			4
Diarreas y TRO			✓		✓		✓	✓	✓			4
Aliment. del dest.			✓			✓	✓					3
Educ. Nutric.			✓		✓		✓					4
Capacitacion en salud.		✓										2
Asistencia Técnica									✓			1
Lactancia mat.			✓									1
Vit. A			✓				/					1


CARE
CONCERN
SAVE.
P.S.R.A.
PLAN P.
F.H.I.
M.F.M. F.F.H.F.
CARITAS
PRITECH.
ASONGS LDZ
FENASONG
TOTAL
Centro documentación
Medios Audiovis usados
Laminarios
Radio
Slides
Video
Otros
Sociodramas
Origen material Educat.
Propio
M.P.S.S.P.
Caritas
Extranjero
Otro
Necesidades: den
Personal
Asistencia tecnica
Estrateg. ed. area rural.
Evaluación
Sist. información
Recolec. y análisis datos
Estadist.
Metodología y Técnicas comunic.
Capacitar al personal
profesional nut.
de campo R.P.S.
Material Educativo
Técnicas basicas de elabor.
Revistas elaborac.
Transparencias
Medios de comunicac. Salud
Otras. Compra audiov. equip
Técnicas uso audiovis.
Normas
No implemen tan progs..
2x semana
4 nutric.
Seminario actualizacion en Sup

51.

LISTA DE PERSONAS E INSTITUCIONES ENTREVISTADAS

FECHA	HORA	NOMBRE	CARGO
Marzo 7	15:30	Paul Hartenberger	Subjefe Div. Salud y Recursos Humanos USAID
Marzo 7	16:30	Fernando Rocabado	Div. Nutrición
Marzo 7	17:30	ASONGS LA PAZ	Directiva
Marzo 8	8:30	Dr. Angel Valencia	Director Gral de Salud MPSSP.
Marzo 8	9:30	Sub Comite de Nutrición	
Marzo 8	10:00	Beverly Tucker	Child Survival Fellow
Marzo 8	14:00	Corinne M. Seltz	Asistente Director
Marzo 8	15:30	PVO/REC	Directiva
Marzo 8	17:00	Rosario Alurralde	Directora INAN
Marzo 9	8:30	Ana Maria Aguilar	Consultora PRITECH
Marzo 9	9:30	Jorge Velasco	Coordinador del Proyecto
Marzo 9	10:00	Elba Calero Carmen Daroca Susana de Martinez Eunice Zasmbrana	Prog. Población USAID Directora CITA Consultora PRITECH MPSSP.
Marzo 9	11:00	Mauricio Bacardit	Presidente FENASONGS
Marzo 9	14:30	Edy Jimenez	Fundación San Gabriel
Marzo 9	16:30	Magaly de Yale	Unicef
Marzo 10	9:00	Reunion General	Varias Instituciones
Marzo 17	9:00	Olga de la Oliva	Nutricionista FHI
Marzo 17	10:00	Albina Torrez Nancy Fajardo	Div. Nutrición Div. Nutrición
Marzo 17	17:00	Nathan Robison	Director PSRA.
Marzo 18	9:00	Nancy Pereira Rodolfo Saravia Desiderio Carvajal Orlando Huanca	Ed.. Popular MPSSP. Mov. Social Mov. Social Educ. Popular

FECHA	HORA	NOMBRE	CARGO
Marzo 18	10:00	Juan Manuel Sotelo	Rep. Org. Mundial Salud
Marzo 18	14:30	Save The Children	Jefe de Programas
Marzo 18	17:00	Nathan Robison	Director PSRA.
Marzo 21	9:00	Magaly de Yale	UNICEF
Marzo 21	14:00	Fernando Mendoza	Banco Mundial
Marzo 22	9:00	Mauricio Mamani	CENDES
Marzo 22	14:00	Mario Telleria	PVO/REC Secretario Gral
Marzo 22	15:00	OMS/UNICEF/USAID	
Marzo 23	15:00	Andres Bartos Gonzalo Fernandez	Director Materno Infantil Director Div. Nutrición
Marzo 24	9:00	Rosario Alurralde	Directora INAN
Marzo 25	15:00	PVOs.	

Nota: Por error de copiado se omitió reunión con el Sr. Curt Schaeffer dia Jueves 10 a Hrs. 14.

Los dias 11 y 12 de marzo se realizaron viajes al campo: comunidades de Hueko, Huayllani y Capurita Calata de la Provincia Manco Kapac - Programa de Freedom From Hunger Foundation (MFM).

APPENDIX C

TABLES AND FIGURES RELATED TO THE NUTRITIONAL SITUATION IN BOLIVIA

TABLE 1

PERCENTAGE OF MALNOURISHED CHILDREN AGED 6-59 MONTHS, BY GEOGRAPHIC REGION AND URBAN/RURAL LOCATION, 1981

Region/ Location	Sample Size	Malnourished Classification Gomez* %	Waterlow** %
LaPaz	896	4.7	46.0
Cochabamba	890	6.8	29.0
Santa Cruz	885	3.6	28.0
URBAN	2,671	5.0	34.0
Altiplano	1,045	11.3	56.0
Valles	1,038	11.5	48.0
Llanos	1,009	5.0	36.0
RURAL	3,092	9.2	47.0
Altiplano	1,941	8.2	51.5
Valles	1,928	9.3	39.0
Llanos	1,894	4.3	32.0
TOTAL	5,763	7.3	41.0

* Grades 2 & 3, weight-for-age.
** (-2 S.D.), combined height-for-age and weight-for-height.

Source: National Nutrition Survey, National Institute of Food and Nutrition, Bulletin No. 1, March 1985, Tables 1 & 2.

TABLE 2

PREVALENCE OF MALNUTRITION IN CHILDREN 0-5 YEARS OF AGE IN 18 MOTHERS CLUBS* IN LA PAZ-EL ALTO, 1983-1986

	1983	1985	1986
% Malnourished (below 3rd percentile)	19.7	30.2	20.4
Number weighed	2335	2140	2070

* The 18 Clubs with steady attendance (averaged 120 per club) and reliable data over the three-year period.

Source: SVEN, published and unpublished data.

TABLE 3

PREVALENCE AND DEGREE OF ENDEMIC GOITER BY REGION, DEPARTMENT, URBAN/RURAL LOCATION, 1983-84 AND 1985-86

Department/ Regional Health Unit	1983-84 Prevalence (%)		1985-86 Degree (%)	
	Urban	Rural	Grades 1-4 (palpable)	Grades 2-4 (visible)
Chuquisaca	72	80	79	52
Pando	76	53	71	36
Trinidad, Beni	56	69	65	31
Tarija	50	64	64	30
La Paz	61	61	63	30
Cochabamba	57	62	63	29
Santa Cruz	74	77	57	24
Potosi	63	66	41	23
Riberalta, Beni	-	-	60	22
Oruro	77	59	59	8

Sources: MPSSP. Diagnostico del Bocio Endemico en Escolares, 1983-84, Mayo, 1985 (prevalence); Evaluacion de las Campanas de Aplicacion de Aceite Yodado, 1985-86, Cuadernos de Vigilancia Nutricional No. 5, Feb. 1988 (degree).

TABLE 4

PREVALENCE OF MALNUTRITION IN CHILDREN 0-5 YEARS OF AGE, 1986-1988
PRIORITY PROVINCES* FOR NUTRITION PROJECT

Active C.S. PVOs**	Department and Province	Population (000s)	Malnutrition % weight/age (less than 3rd percentile) %	N
	La Paz			
PP,C	Ingavi	125	33.0	6490
C	Aroma	99	29.5	1432
RA,MFM,C	Camacho	101	27.1	4819
FHI,C	Omasuyos	119	25.3	8201
SCF,C	Inquisivi	109	23.0	243
FHI,PP,C	Pacajes	92	22.9	2376
	Cochabamba			
C	Arani	52	30.2	447
C	Carrasco	63	29.1	498
PCI,C	Capinota	32	28.4	267
C	Esteban Arce	39	20.2	253
	Chuquisaca			
CR,C	Zudanez	36	21.7	46
CR,C	Nor Cinti	78	-	-
CR,C	Tomina	40	-	-
	Potosi			
CR,C	Saavedra	72	29.0	2994
CR,FHI,C	Chayanta	119	26.8	532
PCI,C	Charcas	40	-	-
	Tarija			
CR,C	Mendez	35	21.9	444

* Prioritization criteria: target Departments, USAID Bilateral Child Survival Project (draft); provinces with highest levels of poverty (Morales, 1984); provinces with over 30,000 population and relatively accessible to Departmental Capital.

** Child Survival PVOs:
PP = Foster Parents Plan
C = Caritas Boliviana
MFM = Meals for Millions/FFH
RA = Andean Rural Health
CR = CARE
SCF = Save the Children, USA
PCI = Project Concern
FHI = Food for the Hungry

Source: SVEN, latest available data, 1986-88.

TABLE 5

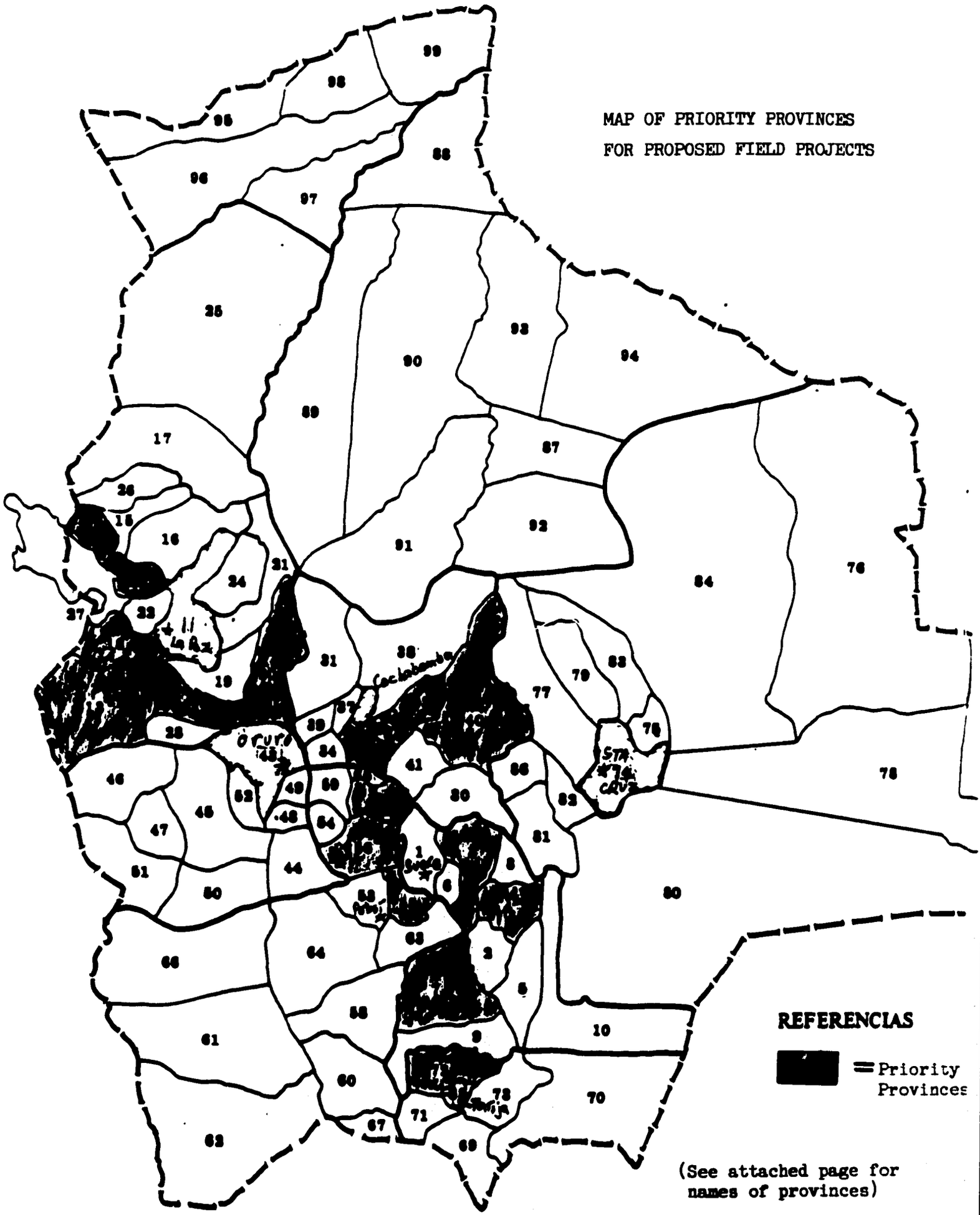
SOCIOECOLOGICAL CLASSIFICATION OF MALNOURISED POPULATIONS, BY DEPARTMENT AND COMMUNITY, 1987-1988, BOLIVIA

Department	Broad Ecological Zone	Physical Accessibility to Major Town, City	Community	Malnutrition Moderate/Severe
				% H/A
Cochabamba	Puna (tundra, cold steppe)	Distant	Kami	56.0
			Colomi	55.0
	Valley	Distant	Mizque	54.5
			Independencia	45.9
		Closer	Cliza	36.7
			Capinota	35.6
			Toco	30.5
			Arani	25.8
	Town	Nearby	Quillacollo	33.9
			Sacaba	23.8
				% W/A
La Paz (Inquisivi Province)	High Valley	Distant	(6 villages)	25.7
		Closer	(7 villages)	40.7
		Town	Inquisivi	14.7
	Yungas (sub-tropical valley)	Distant	(2 villages)	9.2
		Closer	(1 village)	15.3
		Town	Circuata	8.7
	Altiplano	City	El Alto	20.4
Chuquisaca	Valley	Distant	Azurduy	29.5
		Closer	Zudanez	21.7
		Closer	Padilla	17.7
		City	Sucre	20.8
Tarija	Puna (tundra, cold steppe)	Distant	Pro.Mendez	20.7
	Valley	Town, nearby	San Lorenzo	12.7
		City	Tarija	19.5

Sources: Assessment Team tabulations from SVEN; Height-for-Age (-2 S.D.) comes from Primary School Height Census, 1987-88, urban schools; Weight-for Age (3rd percentile) most recent semestral data; Inquisivi data from Save t Children communities.

APPENDIX D

MAP OF PRIORITY PROVINCES FOR PROPOSED FIELD PROJECT


MAP OF PRIORITY PROVINCES
FOR PROPOSED FIELD PROJECTS
REFERENCIAS
= Priority Provinces
(See attached page for names of provinces)

CODIFICACION GEOGRAFICA DE BOLIVIA

DEPARTAMENTO DE CHUQUISACA

01 Oropeza
02 Azurduy
03 Zudáñez
04 Tomina
05 Hernando Siles
06 Yamparáez
07 Nor Cinti
08 Belisario Boeto
09 Sud Cinti
10 Luis Calvo

DEPARTAMENTO DE ORURO

43 Cercado
44 Avaroa
45 Carangas
46 Sajama
47 Litoral
48 Poopó
49 Pantaleón Dalence
50 Ladislao Cabrera
51 Atahuallpa
52 Saucarí

DEPARTAMENTO DE SANTA CRUZ

74 Andrés Ibáñez
75 Warnes
76 Velasco
77 Ichilo
78 Chiquitos
79 Sarah
80 Cordillera
81 Vallegrande
82 Florida
83 Obispo Santiesteban
84 Ñuflo de Chávez
85 Angel Sandoval
86 Manuel María Caballero

DEPARTAMENTO DE LA PAZ

11 Murillo
12 Omasuyos
13 Pacajes
14 Camacho
15 Muñecas
16 Larecaja
17 Franz Tamayo
18 Ingavi
19 Loayza
20 Inquisivi
21 Sud Yungas
22 Los Andes
23 Aroma
24 Nor Yungas
25 Abel Iturralde
26 Bautista Saavedra
27 Manco Kapac
28 Gualberto Villarroel

DEPARTAMENTO DE POTOSI

53 Frías
54 Bustillos
55 Cornelio Saavedra
56 Chayanta
57 Charcas
58 Nor Chichas
59 Alonso de Ibáñez
60 Sud Chichas
61 Nor Lípez
62 Sud Lípez
63 Linares
64 Quijarro
65 Gral. Bilbao
66 Daniel Campos
67 Modesto Omiste

DEPARTAMENTO DEL BENI

87 Cercado
88 Vaca Diez
89 Gral. Ballivián
90 Yacuma
91 Moxos
92 Marbán
93 Mamoré
94 Iténez

DEPARTAMENTO DE PANDO

95 Nicolás Suárez
96 Manuripi
97 Madre de Dios
98 Abuná
99 Gral. F. Román

DEPARTAMENTO DE COCHABAMBA

29 Cercado
30 Campero
31 Ayopaya
32 Esteban Arce
33 Arani
34 Arque
35 Capinota
36 Jordán
37 Quillacollo
38 Chapare
39 Tapacarí
40 Carrasco
41 Mizque
42 Punata

DEPARTAMENTO DE TARIJA

68 Cercado
69 Arce
70 Gran Chaco
71 Avilez
72 Méndez
73 O Connor

1 CHUQUISACA
2 LA PAZ
3 COCHABAMBA
4 ORURO
5 POTOSI
6 TARIJA
7 SANTA CRUZ
8 BENI
9 PANDO

APPENDIX E

LIST OF CONTACTS

APPENDIX E

LIST OF CONTACTS

U.S. Agency For International Development (USAID)
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La Paz, Tel: 320-824

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Deputy Chief, Health and Human Resources

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Food and Population Advisor

Mr. Salvador Pinzino
PL480, Food for Peace Officer

Mr. Arnulfo Peñalosa
PL480, Food for Peace Officer

Mr. Luis Moreno
PL480, Food for Peace Officer

Mr. Peter Goosens
Health Information System Consultant

Ms. Bambi Arellano
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USAID-Bolivia
(Washington contact)

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Latin America and Carribbean Bureau
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(Washington contact)

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(Washington contact)

Mr. David Cohen
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USAID Bolivia
(Washington contact)

Mr. Gerald Bowers
Former Chief Health and Human Resources
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(Washington contact)

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DMI
Crecimiento y Desarrollo

Dr. Ana Quiroga
DMI
Mujer, Salud y Desarrollo
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Lic. Nancy Rojas
Nutricionista
DNNA
Division Educación Alimentación Nutricional

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Direccion de Movilización Social

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Lic. Desiderio Carvajal
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Lic. Eunice Zambrano
Departamento de Planeación

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Director
Materno Infantil

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MSSPP: Unidad Sanitaria, Cochabamba

Dr. Arzabe
Director

Lic. Luci de Saavedra
Nutritionista

MSSPP: Unidad Sanitaria, Tarija

Dr. G. Ugarte
Director

Dr. Pastor Borda
Materno Infantil

Lic. Ruth Aramayo
Nutritionista

Lic. Rosario Beltrán
Auxiliarde Nutrición

Private Voluntary Organization-Rotating Executive Committee (PVO-REC)

Lic. Mario Telleria
Secretario General

Ms. Beverly Tucker
Johns Hopkins University Child Survival Fellow

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APPENDIX F

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